

The cover features several stylized, light green leaf motifs scattered across a pale yellow background. Each motif consists of a stem with two leaves pointing in opposite directions.

CAUSES OF DEATH IN THE WORKPLACE

J. Paul Leigh

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Causes of Death in the Workplace

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To Maria and Wesley Leigh

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Abbreviations

ANSI	American National Standards Institute (for injuries and illnesses classification)
BLS	Bureau of Labor Statistics
CDC	Center for Disease Control
CFOI	Census of Fatal Occupational Injuries
EPA	Environmental Protection Agency
NA	Not applicable or not available
N.E.C.	Not elsewhere classified
n.e.c.	
NIOSH	National Institute for Occupational Safety and Health
NSC	National Safety Council
NTOF	National Traumatic Occupational Fatality Study
OSH	Occupational Safety and Health
PMR	Proportionate Mortality Ratios
Q.E.S.	Quality of Employment Survey
S.I.C.	Standard Industrial Classification (of industries)

SDS	Supplementary Data System
uns	Unspecified
WC	Workers' Compensation

Chapter 1

Introduction

How dangerous is your job? How could your job kill you? As simple as these questions are, few studies are available to answer them.¹

This book serves three purposes. First, 265 occupations and 324 industries will be ranked according to job-related death rates. Second, the causes of death within each occupation and industry will be described. Third, I will argue that as a matter of public policy, more information about job hazards should be provided to employees than is currently being provided. The government requires nutritional labeling on canned and packaged food. The government should also require warning labels on job application forms since all jobs carry at least some risks.

The contribution of this book is the attempt to be as comprehensive as possible. No other domestic or foreign study, including U.S. government studies, of which I am aware provides information on as many jobs and the causes of death within those jobs as is provided in the tables in this book. Moreover, unlike the Census of Fatal Occupational Injuries and the National Traumatic Occupational Fatalities studies, data in this book include job-related disease deaths, including heart attacks.

INADEQUATE PUBLIC KNOWLEDGE

Most people from ages 22 through 64 spend roughly forty percent of their waking hours at a job where there is considerable potential for exposure to fatal

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safety risks of traffic accidents, falls, murder, electrocution, fire, being struck by objects, explosions, heat, cold, animal attacks, aircraft crashes, as well as fatal health risks from radiation, asbestos, silica, benzene, coal dust, AIDS, smoke, carbon monoxide, pesticides, benzidine, arsenic, lead, chromium, and stress leading to heart disease or cancer. Yet many people are poorly informed about job hazards. Epidemiological surveys suggest that, at most, roughly only 5 to 20 percent of United States employees are well informed concerning the safety and health risks of their jobs.² Hospital workers were recently found to greatly underestimate chemical risks and construction workers were found to underestimate physical risks at the job.³ Dunn (1972) found little correlation between what chain sawers believed to be the most frequent serious on-the-job injuries and official accident reports for chain sawers. Although professional jobs are far safer than laboring jobs, there is evidence that those in the highest paying jobs (e.g., professionals) have the greatest information, while those in the lowest paying jobs (e.g., laborers) have the least information.⁴

Transportation accounts for 25 to 40 percent (the plurality) of job-related traumatic deaths.⁵ Yet people who respond to surveys, especially young men, greatly underestimate job risks associated with vehicle collisions.⁶ A 1993 poll of 686 corporate safety officers by the National Safety Council revealed that of the 377 who answered the question, 83 percent believed that motor vehicle collisions caused 10 percent or less of their job-related injuries.⁷ Americans, in general, underestimate their chances of dying in an auto crash or in a pedestrian accident, whether on or off the job.⁸ The Occupational Safety and Health Act (OSH Act) of 1970 gives scant attention to collisions.⁹ Even occupational injury researchers and some coroners ignore motor vehicle crashes.¹⁰ As of this writing, the Occupational Safety and Health Administration (OSHA) has only recently suggested rules pertaining to traffic school and seatbelt use for employees who frequently travel and relating to vehicle safety inspections. These rules have yet to be enacted.¹¹

A typical case involved a 17-year-old boy from Plainfield, Indiana. The boy died in a company-owned truck on a rain-slick road while delivering pizza. His mother believed Domino's policy of delivering a pizza within 30 minutes contributed to her son's death. The state labor relations board cited the Domino's franchise with violating a labor regulation insuring a place of employment "free from recognized hazards."¹² Was the 17-year-old boy fully aware of the driving hazards prior to taking the job? Should Domino's Pizza Co. encourage fast driving?

Murder is estimated to result in 17 percent of all job-related injury deaths.¹³ Contrary to popular opinion, most job-related murders are not committed by angry co-workers or clients, but occur during robberies.¹⁴ Some studies indicate women are more likely to die from murder on the job than from any other cause.¹⁵ Yet, again, the OSH Act does not address homicides, and some researchers and coroners continue to ignore them.¹⁶ One California OSH administrator recently acknowledged the lack of attention paid to job-

related murders by OSH professionals.¹⁷ The public might also discount the risk of homicide while on the job.

If accurate job-risk information were widely available, persons in dangerous jobs would most likely be paid more than similarly qualified persons in safe jobs. Dangerous jobs are undesirable for most people unless they are compensated with a high wage. Economists call this phenomenon the Compensating Wage Hypothesis (Hypothesis).¹⁸ It is undoubtedly true that in highly publicized dangerous jobs, such as police work, firefighting, coal mining, and airplane piloting, workers receive a wage premium or Compensating Wage, compared to jobs involving safer work they may be equally qualified for. But the Census lists over 400 occupation categories, and the Chamber of Commerce lists over 400 industry categories. Many jobs will surprise readers with their high and low death rates. Is evidence for the Hypothesis available for the 400 occupations and 400 industries? There is no consensus among economists. Thaler and Rosen (1976), Viscusi (1979), Kriesner and Leeth (1991), and Moore and Viscusi (1988) find evidence for the Hypothesis, while Barry (1985), Brown (1980), Dickens (1984), Graham and Shakow (1990), Leigh (1989, 1991, n.d.), and Palme and Wright (1992) do not find evidence in most of the cases they analyzed. The lack of evidence for the Hypothesis is consistent with the argument that information about job hazards is not widespread.

LACK OF RESEARCH

The lack of widely disseminated knowledge about job risks is not due to a lack of interest. Surveys by management consulting firms and the University of Michigan consistently show that employees list safety as a top job priority.¹⁹ Job safety is sometimes mentioned as more important than pay.

The lack of widely disseminated knowledge about job risks is due in part to a lack of attention by researchers. The National Institute for Occupational Safety and Health (NIOSH) consistently receives one of the lowest levels of funding among all of the research institutes in the National Institutes of Health and the Centers for Disease Control. In 1992, for example, some of the smallest budgets went to the National Institute on Dental Research (\$159 million), and the National Center for Human Genome Research (\$105 million).²⁰ In 1992, NIOSH received \$103 million and was second from the bottom in funding.²¹ The least amount, \$45 million, went to the National Center for Nursing Research. Moreover, research into injury deaths as opposed to disease deaths has been minimal. The lion's share of NIOSH's meager budget is applied to research on disease.

As an example of the little research attention given to occupational injuries and illnesses, consider this fact: The experts cannot agree on the number of injury deaths per year, and few experts even attempt to guess the

number of disease deaths. In 1987 a panel of experts from the National Academy of Sciences "found it rather startling that an agreed upon method has not been devised to estimate a phenomenon as basic as traumatic (injury) death in the workplace."²² A different panel of experts concurred with that opinion as late as 1991.²³

New evidence indicates that job-related deaths are much greater in number than the estimates published in the Bureau of Labor Statistics (BLS) reports dating from the late 1970s.²⁴ The BLS reports from the early 1980s estimate between 3,000 and 4,000 injury and illness deaths. But these early (1970-89) BLS reports may have missed more than 70 percent of job-related injury deaths and an even higher percentage of disease deaths.²⁵ In one of the most exhaustive studies on injury deaths to date, NIOSH collected data from death certificates from 1980 to 1985 in all 50 states and attempted to count the number of injury (not illness) deaths.²⁶ The NIOSH study estimates that there were roughly 7,000 injury deaths alone per year between 1980 and 1985. The National Safety Council (NSC) estimates 12,000 injury deaths annually for the same years.²⁷ But the NSC ignored homicides and suicides which account for around 20 percent of all job-related injury deaths in a recent government study.²⁸ A recently convened national committee on occupational injury prevention estimates 7,000 to 11,000 annual injury deaths.²⁹

Occupational disease deaths are difficult to count, given the problems in pinpointing an exposure that caused or exacerbated, for example, a cancer or heart disease. One government study estimates at least 1,700 annual deaths during 1980-5³⁰ while a New York study estimates disease deaths were eight times as high as injury deaths.³¹ If the New York estimate applies to the entire United States, roughly 62,000 to 86,000 occupational disease deaths occur each year. The total estimated deaths would then be between 4,700 (3,000 + 1,700) and 98,000 (12,000 + 86,000). Evidence presented here suggests that the higher estimate is more accurate.

But even the 98,000 a year estimate may be conservative. Many people complain of job stress. A growing number of scientific studies have found correlations between job stress and heart disease.³² One study found a striking correlation between heart disease and hazardous working conditions.³³ The link between job stress and cancer may be even stronger. Yet the job stress-cancer link has yet to be thoroughly researched.

In comparison, AIDS killed roughly 24,000 Americans in 1991,³⁴ while deaths related to illicit drug use numbered approximately 20,000 in 1990.³⁵

COSTS

Job-related deaths exact a staggering toll on the individuals involved, family members, the legal system, and employers as well as the economy at large.

The costs of occupational injuries and illnesses have never been thoroughly studied. A Rand Institute study estimated occupational *injuries* cost \$83 billion annually: \$51.7 billion in lost production and \$31.5 billion in medical costs in 1989.³⁶ The National Safety Council (1993) estimated a cost of \$116 billion for *injuries* in 1992. But the Council's estimate ignored assaults, murder, and suicide. The costs of occupational disease have been estimated to be \$600 million in New York State³⁷ in 1985. National estimates of occupational disease costs have never been extensively studied, but some analysts have put the number over 200 billion dollars.³⁸

Personal Costs

Death is tragic at any age, but perhaps more tragic at younger ages. Job-related injury deaths are especially costly in terms of the years of potential life lost. For example, the average job-related traumatic death occurs at 37 in the NIOSH study, while the average age of death due to heart disease is 61.³⁹ Premature occupational nonfatal and fatal injuries (not diseases) result in about 250,000 potential productive years of life lost each year,⁴⁰ while cerebrovascular disease (strokes) are responsible for 234,000 years of productive life lost in recent years.⁴¹

The toll of injuries and diseases is not evenly distributed among all groups. African-Americans, Hispanics, inexperienced, and low-wage workers sustain a disproportionate share of all job-related fatalities.⁴²

Legal Costs

An increasing number of lawsuits allege that some employers are partially, and sometimes criminally, responsible for employee deaths.⁴³ Litigation is especially expanding for on-the-job murders.⁴⁴ In a 1992 Los Angeles case, a judge ordered a shopping center owner to pay \$3.5 million to the family of a 26-year-old clerk who was murdered leaving work. Sometimes information on hazards is withheld from the employees. Other times, employers are judged to be negligent for other reasons such as removing security devices or bolting shut fire exits.

Executives from Film Recovery Systems were found guilty of withholding information. The company would treat old film with cyanide and sell it. All employers in the 1980s were required to inform their employees of the dangers of cyanide and require that workers use rubber gloves, boots, aprons, and respirators. Film Recovery did not take these precautions. Film Recovery hired a number of non-English-speaking immigrants. On February 10, 1985, a non-English-speaking immigrant dropped dead of cyanide poisoning. Eight months later, three Film Recovery executives were tried and convicted of murder.⁴⁵

Manville Corporation, the world's largest asbestos company, also attempted to hide information. Their workers have generated more occupational disease lawsuits than any other group of workers. The workers have alleged that Manville knew of the deadly aspects of working with asbestos since 1940, but, because of corporate policy, their executives and doctors refused to inform workers of the hazard. The executives in the 1930s and 1940s were worried that word would get out that asbestos caused lung cancer. Memos were circulated among corporate officers and doctors during the 1930s and 1940s indicating this coverup. Many of the workers' lawyers believe these signed memos swung the juries in their favor.⁴⁶

From the early 1970s through the end of 1982, lawyer and court expenses--not settlements which are transfers--for asbestos suits were estimated to have cost \$1 billion in 1982 dollars.⁴⁷

A variety of negligence cases have arisen. A judge in New York sentenced two business owners to prison in a case that equated exposing employees to toxic chemicals with "assault with a deadly weapon," a charge normally reserved for street crime.⁴⁸ The Texas Supreme Court ruled that a convenience store chain can be required to pay damages to the family of a murdered female clerk. The court found that E-Z Mart Stores, Inc. was negligent in removing security devices.⁴⁹

In 1991 a fire at a chicken processing plant in North Carolina killed 25 workers. The deaths resulted from the inability of workers to escape through fire exits that had been bolted shut by management. Apparently management was concerned that too many workers were leaving work early and taking too many breaks. The plant had not been inspected for several years. At the time, North Carolina only had enough OSH inspectors to inspect a worksite once every 75 years.⁵⁰

A recent OSH legal case involved armed robbery. A woman in Oakland, California is suing for being fired. In March 1993 she was working the night shift at Taco Bell and was robbed at gunpoint. She later informed her manager that she did not want to work at night. She was fired because she refused night work. She is now suing Taco Bell for not providing a safe workplace.⁵¹

Finally, another recent case involved a worker who died rescuing a co-worker at an electroplating plant in Oakland, California. In September 1993 one worker climbed into an enclosed tank to help push another worker to safety who had passed out from inhaling cyanide and acid fumes. But the rescuing worker himself was quickly overcome with the same fumes. He collapsed and died. OSHA investigators reported that the working conditions were illegal. The plating company had been cited for 37 similar violations in 1991. The deceased worker was not covered by Workers' Compensation (WC). Fines and criminal lawsuits are currently being prepared.⁵²

As these stories illustrate, some employers have resisted attempts to provide safe and healthy workplaces. But the lessons of these stories and others like them that took place in the 1980s did not draw their due attention in that

decade. In March 1989 the Bush administration asked for more than \$200,000 in cuts from the Justice Department section that prosecutes companies involved in workplace deaths. From 1980 to 1988, 30 cases of job-related criminal homicide had been referred to the U. S. Justice Department by OSHA. By 1988 the Justice Department had prosecuted only four.⁵³

Employer Costs

Most employers would prefer safe and healthy jobs and workers. Workers' morale and productivity are higher in safe and healthy jobs than in unnecessarily risky ones. Strike and absenteeism rates are also much lower in safe than in hazardous industries.⁵⁴

Consider this example for the strike-hazards association. At a Ford glass plant, noise readings were well over 90 decibels. When one worker's hand was caught in a machine, his cries for help went unheard. Under threat of a strike, the company enclosed 50 of the noisiest machines and reduced the decibel count to around 70.⁵⁵

There is evidence that some jobs may have gotten more dangerous in recent years. Total payments for Worker's Compensation in the United States have increased much faster than inflation for the past 12 years.⁵⁶ Annual job stress claims soared by 7,000 in California, from 1,178 claims in 1979 to 9,368 in 1988.⁵⁷ The number of workdays lost due to injury or illness per employee in the United States has shown a steady rise from 1983 to 1990.⁵⁸ The *Wall Street Journal* attributes part of the increase to management's attempts to speed up the production line.⁵⁹ And this phenomenon is not limited to the United States. The Japanese have invented a word for death from overwork: "karoshi."⁶⁰

SUMMARY

Information on job-related deaths is inadequate. While some employers are negligent, a greater villain may be the lack of widespread knowledge about working conditions, chemicals, occupations, and industries that are associated with injuries, illnesses, and deaths. The public's desire for more knowledge appears great. The paucity of research is disquieting. The experts cannot even agree on a definition for an injury, let alone a disease, death. Finally, significant personal legal, economic, and medical costs are associated with job-related deaths.

CAVEATS TO SUBSEQUENT ANALYSIS

There are several limitations to the Supplementary Data System (SDS) information relied on in this study. The SDS is examined in Chapter 3, and the limitations are discussed at length in Chapter 8. Nevertheless, a few of the most important ones are briefly noted here.

The Most Dangerous Jobs? Astronaut and U. S. President

Occupations and industries with very few members are grouped into larger categories, while a handful of especially dangerous jobs are ignored altogether. Data on perhaps the two most dangerous jobs in the United States are not available in the SDS due to the few people in the jobs. The most dangerous job is likely to be the astronaut's. From 1960 to 1991, the United States employed 127 astronauts.⁶¹ Astronauts are defined as persons who travel into space as well as others who are prepared to go. The death rates used are calculated on an annual basis. Assume five astronauts were available each year from 1960 through 1965, and ten were available each year from 1966 through 1991. These five and ten astronauts could sometimes be the same person from one year to the next. A total of 290 astronaut-years were thus "at risk" from 1960 to 1991 (30 from 1960 through 1965 and 260 from 1966 through 1991). Ten astronaut deaths (including one teacher death) occurred over those years. The death rate is then $10/290$ or .034 or 3,400 per 100,000 per year. As will later become evident, a 3,400 per 100,000 rate is astonishingly high.

The second most dangerous job is likely to be the president of the United States. During our 217 years of democracy, four presidents have been assassinated: McKinley, Garfield, Lincoln, and Kennedy. Harrison died of pneumonia, weeks after delivering a three-hour inaugural address in the cold and rain. F. D. Roosevelt and Harding died of heart attacks while in office. Even if Roosevelt's and Harding's deaths are not regarded as job-related, the death rate for the president is $5/217 = 0.023$ or 2,304 per 100,000 per year. As we will see, no other jobs even approach these two rates.

Due to category definition, still other very hazardous jobs are not included in the SDS statistics, such as oil rig firefighters, window washers on high rise buildings, sea divers,⁶² treasure hunters, and elephant trainers.

Professional athletes are included in one Census category, yet no information is available about specific sports. Boxers and race car drivers undoubtedly have high death rates. An overlooked professional sport that is probably also high is horse racing. Jockeys do not wear much protective gear, and they can be thrown off a speeding horse, injured on a rail, or trampled to death. Horse trainers are also at risk. An overseer of the stable that has won nearly every major stakes race in the United States was recently hit by a runaway horse. He was knocked into a coma and recently died of pneumonia.

Mining, Farming, Fishing, Maritime, Military and the Age of Data

The SDS data are incomplete in their coverage of coal miners and all agricultural workers. The incomplete coverage comes from relying on Worker's Compensation records. Coal miners who suffer an accident are always covered by WC. However, black lung disease or coal workers' pneumoconiosis has not always been compensated by WC in all states.⁶³ As a result, the federal government established the Black Lung Disability Trust to pay medical, disability, and death benefits to all black lung patients and beneficiaries.⁶⁴ Black lung was responsible for roughly 940 deaths per year during the time period of this study, 1979 to 1986.⁶⁵ Yet the SDS data account for roughly only 40 deaths due to black lung per year. If 940 black lung deaths had been included in the rankings in Tables 4.1 and 5.1, the occupation Miner, n.e.c., and the industry Bituminous Coal Mining would appear first on both lists.

Virtually all state WC agencies exclude farmers and farm workers on small farms, and many state WC agencies exclude farmers and workers on large farms.⁶⁶ Yet farming is especially hazardous.⁶⁷ Among broad industry divisions, such as manufacturing, retail sales, transportation, and so on, agriculture has one of the highest injury death rates: 52 per 100,000 per year.⁶⁸

Because data were not available from all states and because the SDS relied exclusively on WC information, several other occupations were excluded. Data from Alaska were not available in the SDS. Alaskan fishermen apparently have fatality rates (415 per 100,000) higher than any rate found with the SDS data.⁶⁹ Many fishermen, railroad workers, and all merchant sailors are excluded from the SDS/WC data relied on here. Yet, again, fishing, railroads, and merchant shipping are excessively dangerous. In addition, all military occupations are excluded from the SDS data.

Another important limitation concerns the age of the data, 1979 to 1986. AIDS deaths, for example, were just beginning to occur during the years pertaining to these data. This may not be a severe limitation, however. From January 1981 to September 1992, only 69 health-care workers, at most, in the United States died or contracted the AIDS virus as a result of job-related duties.⁷⁰

In summary, the SDS data, relied on in this study, have limitations as are examined in Chapter 8. Readers are cautioned against singling out an occupation and concluding that, for example, stone cutters hold the most dangerous job. The lists appearing in Tables 4.1 and 5.1 are much more reliable when they are used either (1) in their entirety to indicate which groups of jobs are hazardous or safe, or (2) to indicate causes of death within jobs.

Despite these limitations, this study contributes to the literature. There have been no other attempts to rank as many jobs or to provide information on the causes of deaths within jobs, using as much data as are available in the SDS.

The next chapter briefly reviews existing studies and their attempts to rank occupations and industries by job-related deaths. Chapter 2 may be skipped without disrupting continuity.

NOTES

1. See Baker et al., 1982; Bell et al., 1990; Center for Disease Control, 1985; Cone et al., 1991; Leigh, 1987; Meng, 1991; National Safety Council, 1993; Robinson et al., 1988; Root and Sebastin, 1981; Thaler and Rosen, 1976; Toscano and Windau, 1993; and United States Department of Health and Human Services, 1993.
2. See Shilling and Brackbill, 1987.
3. See Behrens and Brackbill, 1993.
4. See Robinson, 1991.
5. See Cimini and Becker, 1993.
6. See Shilling and Brackbill, 1987.
7. See Smith, 1993.
8. See Slovic, Fischhoff, and Lichtenstein, 1979.
9. See Baker et al., 1982.
10. See Shannon et al., 1993, and Runyon, Loomis and Butts, 1994.
11. See *San Jose Mercury News*, Jan. 26, 1992, and United States Department of Labor, 1990.
12. See *San Jose Mercury News*, Dec. 19, 1989.
13. See Cimini and Becker, 1993.
14. See Castillo and Jenkins, 1993.
15. See Davis et al., 1987, and Kraus, 1987.
16. See Shannon et al., 1993, and Runyan, Loomis, and Butts, 1994.
17. See *San Jose Mercury News*, April 18, 1994.
18. See Smith, 1979.
19. See Waldman et al., 1989, and Staines and Quinn, 1979.
20. See National Institutes of Health, 1992.
21. See Minter, 1992.
22. See National Research Council, 1987.
23. See Baker et al., 1992.
24. See National Research Council, 1987, and Kane and Derstine, 1992..
25. See Toscano and Windau, 1993.
26. See NIOSH, 1989, and Bell, Stout, and Bender, 1990.
27. See National Safety Council, 1993.
28. See Toscano and Windau, 1993.
29. See Center for Disease Control, April 1992.
30. See National Center for Health Statistics, 1992.
31. See Markowitz et al., 1989.
32. See Karasek and Theorell, 1990.

33. See Murphy, 1991.
34. See National Center for Health Statistics, 1992.
35. See McGinnis and Foege, 1993.
36. See O'Neill, 1993.
37. See Markowitz et al., 1989.
38. See Ringen, 1989.
39. See National Center for Health Statistics, 1992.
40. See Center for Disease Control, October 1992.
41. See Center for Disease Control, 1991.
42. See Robinson, 1991; Bell et al., 1990; and Sorock et al., 1993.
43. See Boglioli and Taff, 1990; Reiner and Chatten-Brown, 1989a, 1989b; and Freedman, 1990.
44. See *San Jose Mercury News*, Feb. 14, 1994.
45. See Hills, 1988.
46. See Brodner, 1985.
47. See Kakalik et al., 1983.
48. See *San Jose Mercury News*, May 29, 1991.
49. See Harlan and Schmitt, 1992.
50. See *U.S. News and World Report*, Sept. 16, 1991.
51. See *San Jose Mercury News*, March 15, 1994.
52. See *San Jose Mercury News*, March 24, 1994.
53. See Geyelin, 1989.
54. See Gersuny, 1981; Robinson, 1991; Leigh, 1983, 1989b.
55. See Wallick, 1984.
56. See Nelson, 1992.
57. See Peterson, 1990.
58. See National Safety Council, 1993; Robinson, 1991; and Smith, 1993.
59. See Ansberry, 1989.
60. See Impoco, 1991.
61. See Curtis, 1992.
62. See Hoiberg and Blood, 1985.
63. See Freedman, 1990.
64. See Freedman, 1990.
65. See National Center for Health Statistics, 1988.
66. See Rejda, 1984.
67. See Baker et al., 1982, and Purschwitz and Field, 1990.
68. See Purschwitz and Field, 1990.
69. See Schnitzer et al., 1993.
70. See Center for Disease Control, October 1992.

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Chapter 2

Literature Review

This chapter is divided into three sections. The first deals with foreign studies, the second with small U.S. regional studies, and the last with studies that use large data sets that are reasonably representative of the entire United States. Some of the studies attempt to rank occupations or industries by job-related death rates. Rarely are these occupations and industries recorded at the 3-digit level.

FOREIGN STUDIES

Ronald Meng (1991), using four years of data from Canada, investigated 482 occupations. He found roughly 1,000 deaths per year in Canada. Occupations at the top of the death rate list include miners, motormen, pilots, general laborers, insulation workers, lumberjacks, commercial sailors, fishermen, hunters, and iron workers. Meng's most dangerous industries include forestry, mining, and construction. He also found that unionization is higher in those industries with high rather than low fatality rates.

Marin and Psacharopoulos' (1982) data from England indicate that electricians, bricklayers, deckhands, miners, and general laborers are in especially dangerous jobs. Marin and Psacharopoulos investigated only the top 20 occupations, however.

Harrison et al. (1989) studied 1,544 Australian fatalities. Their study estimates the overall Australian job-related death rate to be 8.06 per 100,000 in 1982-4 with the rate for men at 12 per 100,000 versus 1.3 per 100,000 for women. The Harrison et al. (1989) study indicates that industries, such as mining, transportation, and farming, are especially hazardous. In New Zealand, fishermen, hunters, general laborers, pilots, and miners were identified as dangerous occupations during 1974 to 1978.¹

Although Shannon et al (1993) examined 470 job-related deaths in Ontario, this study did not attempt to estimate the number of people "at risk" of death in the various jobs, that is, denominators were not available. Therefore death rates could not be constructed. Even so, the study finds 2 percent of the decedents had alcohol in their blood and 17 percent had cannabis present.

Rossignol and Pineault (1993) analyzed 1,227 fatal work injuries from 1981 to 1988 in Quebec. Data were collected from WC files. From 1981 to 1988, the male rate declined from 12.7 to 8.1 per 100,000. Women's rates were stable at less than 1 per 100,000. Motor vehicle crashes, falls, violent acts, and farming-related injuries were among the most frequent causes of death.

REGIONAL U. S. STUDIES

Most United States studies that attempt to rank more than a handful of jobs according to job-related death rates rely on small United States regional samples. For example, Baker et al. (1982) looked at 148 deaths in Maryland. All but two of the deaths were male. They found that most deaths fall in categories--such as vehicle collisions and homicide--not addressed by the Occupational Safety and Health (OSH) Act of 1970. Approximately 11 percent of the deaths were alcohol-related.

Robinson et al. (1988) studied 212 deaths in Allegheny County, Pennsylvania. They found the highest age-adjusted death rate in the construction industry. In addition, roughly 3 percent of the decedents had alcohol in their blood.

Copeland (1985) gathered data on 147 job-related injury deaths in Miami. Copeland did not collect denominator data, however. Alcohol was found in 4 percent of the decedents.

Goldberg et al. (1989) collected information on 2,483 fatal injuries in California. The majority of these deaths resulted from highway vehicle accidents, assaults, and aircraft crashes. This study points out that deaths due to these three causes are excluded from California's OSHA jurisdiction since these deaths were not seen as preventable by enforcing the state's industrial code. Goldberg et al. (1989) also found that both the youngest and oldest workers have much higher death rates than workers in middle age.

Data from 710 traumatic deaths in Texas indicate that pilots, oil well drillers, iron workers, construction laborers, and truck drivers hold especially risky jobs.² The average age at death was 37.2 years. The leading causes of death were vehicle accidents (22%), machinery-related (15%), homicide (14%), falls (12%), and electrocutions (11%). Of the 18 aircraft accident deaths, five involved helicopter pilots and three involved crop dusting. In 5 of the 10 police deaths, the police officers were pedestrians. Only 20 percent of police deaths were due to gunfire.

Cone et al. (1991) studied 682 California job-related deaths during the late 1980s. Information was gathered from the California Workers' Compensation (WC) system and death certificates. Occupations with the highest rates (per 100,000 per year) include fishers and hunters (84), loggers (78), police (76), miners (44), and truck drivers (37). The greatest numbers of deaths resulted from motor vehicle crashes and homicide.

Murder and on-the-job assault have also received attention in regional studies.³ Seligman et al. (1987), Davis et al. (1987), and Stone (1993) found murder and sexual assault of women especially high at convenience stores.

Finally, Stone (1993) analyzed 277 job-related traumatic deaths during 1989 and 1990 in South Carolina. He estimated an annual kill ratio of 8.84 per 100,000 workers. The industry divisions with the highest death rates were transportation-communication-utilities, construction, and agriculture-fishing-forestry. Leading causes of traumatic deaths were vehicle crashes, homicide, and falls. Death rates for men were about 13 times higher than those for women.

U.S. NATIONWIDE STUDIES

At least five lists that use data representative of the entire United States have been developed by the government and private researchers to provide national rankings of jobs-by-death rates. This book's attention to these nationally representative lists is greater than that given to the small United States regional lists or the foreign lists. Five lists are discussed: three generated by government agencies and two provided by private researchers with the assistance of insurance companies and government data. In addition, a sixth study examined government estimates of the aggregate number of disease deaths due to mesothelioma, asbestosis, silicosis, and pneumoconiosis.

Bureau of Labor Statistics (BLS)

The first list (or set of lists) is drawn from the Bureau of Labor Statistics (BLS). BLS tallies deaths from surveys of roughly 250,000 to 280,000 businesses across the United States each year.⁴ These surveys are required by the OSH Act. Data taken from the OSHA log Form 200 provide the basis of the survey. Every private sector employer with more than ten employees must keep a log of job accidents and illnesses that require more than first aid treatment, and each employee has a legal right to inspect his or her employer's log form. The responses of employers of 11 or more employees to the BLS surveys are mandatory.

The estimated fatality rates per 100,000 per year by broad industry divisions in 1987 are 4.5 for all of the private sector, 24 for mining, 22 for construction, 12 for transportation and public utilities, 9 for agriculture, 4 for

manufacturing, 3 for finance and real estate, and 2 each for services, wholesale and retail trade. Published death rates are available only at the broad, 1-digit level.

The BLS surveys of approximately 250,000 to 280,000 firms also collect data on nonfatal injuries and illnesses. For example, estimates from 1987 represent the work injury and illness experience of about 85 million workers in the private sector of the United States economy.⁵ The number of nonfatal injuries and illnesses and the number of workdays lost because of an illness or injury are aggregated into broad (1 digit) as well as narrow (3 digit) industry classifications and published once a year by the BLS.⁶ Data from coal, metal, and nonmetal mining, and railroads are not included in the BLS report but are included in separate reports from the Department of Labor's Mine Safety and Health Administration and the Department of Transportation's Federal Railroad Administration. The BLS death surveys exclude the self-employed; firms with fewer than 11 employees; private households; and employees of the federal, state, and local governments.

The BLS survey data have many limitations. First, they undercount the number of injury deaths, by perhaps 60 percent, and the disease deaths by more. During 1979 to 1986 (years also included in this study), the BLS estimates roughly 4,000 annual injury *and* illness deaths. Yet during 1980 to 1985, NIOSH estimates 7,000 injury deaths alone,⁷ while the National Safety Council estimates 12,000 injury deaths for the same years.⁸ The national estimates derived from a New York study indicate approximately 70,000 disease deaths.⁹ The same BLS surveys may count only roughly 30 percent of all nonfatal injuries and illnesses.¹⁰

The BLS itself now recognizes the serious undercount from its early surveys. In 1990 the BLS undertook a new massive effort to provide better estimates of injury deaths¹¹ entitled the Census of Fatal Occupational Injuries (CFOI). As testimony to the BLS's dissatisfaction with the early surveys, researchers are no longer allowed access to unpublished lists of 2- and 3-digit industry death rates.¹² Prior to 1988, the BLS readily made these 2- and 3-digit industry death rates available to researchers. One of these unpublished lists appears in Appendix E.

The BLS early surveys' low estimates may, in part, be due to the exclusion of government employees, employees working in small firms, and the self-employed. Roughly 20 percent of the civilian workforce worked for some form of government during the years examined in this study (1979-86). BLS survey data suggest that an inverted "U" describes the relation between industries and firm size, with firms employing 100 to 499 persons sustaining the highest injury rate.¹³ Data from death certificates (not the BLS surveys) divided by the appropriate numbers of employees at risk from all firms suggest, however, that the relation is monotonically decreasing. The smallest firms, with one to ten employees, have the highest injury rates.¹⁴ Using death-certificate (not BLS) data from Allegheny County, Pennsylvania, Parkinson et al. (1986) discovered

that nearly 80 percent of fatal job-related accidents occur in firms with fewer than 100 employees, while roughly 50 percent of United States private sector employees work in such firms.¹⁵ A recent *Wall Street Journal* analysis of 500,000 government safety-inspection records indicated that firms with fewer than 20 employees have death rates averaging 200 per 100,000 per 5 years compared to a rate of .4 per 100,000 per 5 years for firms employing more than 1,000 workers.¹⁶ Finally, the Census of Fatal Occupational Injuries (CFOI) data indicate that 20 percent of injury deaths occur among the self-employed.¹⁷ However, the self-employed comprise roughly 10 percent of the workforce.¹⁸

The low BLS estimate may also be due to the financial incentive firms face to underestimate the number of injuries and illnesses that occur on their premises. The enforcement arm of the OSH Administration has indirectly used BLS data to target industries for inspection. That is, although BLS has refused to allow the OSH administrators to see their raw data, the aggregate data are published. OSH administrators have simply calculated a firm's injury rate based on OSHA Form 200 data and compared it to the aggregate statistics for the industry. If the firm's injury rate exceeded the average, the firm became a candidate for inspection.¹⁹ Insurance companies require firms to pay high premiums if their injury and illness rates are high.²⁰ As a result, a number of firms, including Caterpillar Tractor, have been found guilty of undercounting accidents.²¹ Economic analyses indicated that the under-reporting was apparent in the mid-1980s.²²

The underestimate may also result from workers declining to tell the employer that an injury occurred. Many workers may fear for their jobs or may worry they will be viewed as an accident-prone liability.²³

Another drawback to the BLS information is that the annual bulletins that contain the injury and illness rates are organized around a Standard Industrial Classification (S.I.C.) of industries, rather than a ranking of most dangerous to least dangerous industry. It is difficult to capture a clear picture of where a particular industry ranks without a few hours of careful analysis. Nevertheless, readers may wish to consult these bulletins available in the government documents section of most libraries. Despite the BLS data limitations, they provide the most comprehensive and historically consistent data available on nonfatal injuries and illnesses. For example, in recent issues of the bulletins, separate tables are constructed for occupational diseases of the skin and the lung, of poisonings, and of cumulative trauma such as carpal tunnel syndrome.

National Traumatic Occupational Fatalities (NIOSH-NTOF)

A second government data source on exclusively fatal injuries is the National Traumatic Occupational Fatality (NTOF) surveillance project, organized by the National Institute for Occupational Safety and Health (NIOSH).²⁴ NTOF used data from death certificates collected from 50 states

over a six-year period from 1980 to 1985. Approximately 7,000 job-related traumatic deaths were discovered each year. Roughly 94 percent of the decedents were men, and 6 percent were women. Nearly 40 percent of the women died from murder.

The NTOF data are categorized by broad, 1-digit industry and broad, 1-digit occupations for 50 states. The broad industries and their annual fatality rates (per 100,000 per year) are mining (32); transportation, communication, and public utilities (25); construction (24); agriculture, forestry, and fishing (21); manufacturing (6); services (4); retail trade (3); finance, insurance, and real estate (2); wholesale trade (2). The broad occupations and their rates are transportation operatives (24), farmers (22), nonfarm laborers (16), craftworkers (10), technicians (6), machinists (5), managers (4), service workers (3), specialists (2), sales workers (2), and clerical workers (1).

The NTOF industry estimates are consistent with the BLS nonfatal and fatal rates for broad industry divisions. The broad industry and occupation estimates are also consistent with the SDS data presented here, as becomes evident in Chapters 4 and 5.

The NTOF data set is unique in presenting estimates across the states. The variability is considerable. For example, Utah has a mining fatality rate four times that of California. Wyoming has a manufacturing fatality rate 60 times that of Massachusetts. In the service industry, Arkansas's rate is eight times greater than the rate for New York. For all industries combined, Alaska and Wyoming have the highest fatality rates (34 and 33.5), while Connecticut and Massachusetts have the lowest (1.6 and 2.4).

There are a number of limitations to the NTOF study. First, the NTOF intentionally excludes occupational disease deaths since they are not always easily identified. For example, a lung cancer could have been caused by cigarettes rather than exposure to an on-the-job carcinogen. Heart disease could have been solely the result of genetic factors. Medical consensus on a job-related death is easier to obtain from an injury than an illness. Nevertheless, an increasing number of diseases (in addition to black lung, mesothelioma, asbestosis, and silicosis) are being recognized as job-related. These diseases include, under some conditions, pneumonia, tuberculosis, AIDS, arsenic poisoning, lead poisoning, heart disease, malignant tumors, leukemia and bladder cancer.²⁵

A second problem with the NTOF data is that the denominator data are not perfectly matched to the numerator data. No single source of private and public employment data provides information on both states and occupations for each year of 1980 through 1985. Therefore, the NTOF investigators used several sources of denominator data. For the demographic analyses, the NTOF investigators used the BLS annual average employment household data from *Employment and Earnings* volumes 28-33, 1981-86. These denominators were based on yearly random samples of 60,000 households across the United States. For the state and industry-specific analysis, denominators were derived from

two Bureau of the Census databases: *County Business Patterns Bulletins* for 1980-85 and the *1982 Census of Agriculture*. These county business bulletins do not provide information on agriculture.

A similar problem exists in this study since denominators could not be perfectly matched to numerators. This study does, however, rely on unpublished BLS data made available to the author. Moreover, in the Appendices (A and B), all denominators for this study are listed so that when better data become available, the extent of the bias can be assessed.

Another serious drawback concerns the exclusion of government workers from the NTOF industry and state-specific death rates. Nationally collected employment data that includes federal, state, and local government workers are not available for all the states separately. They are available, however, for the nation as a whole. This study includes government workers in the analyses of occupations and of total deaths combined (Chapters 4 and 6). Government workers are excluded from the industry analyses in Chapter 5.

An additional problem involves occupational classification. Nearly 20 percent of NTOF responses were given "unclassified" occupation.

The NTOF used death-certificate data. Although all death certificates had a box for "injury at work" in the mid-1980s, coroners would not always properly check it. Highway vehicle crashes and homicides were frequently not viewed as job-related by coroners.²⁶

Finally, neither the BLS nor the NIOSH lists contain information on detailed 3-digit occupations. Most of the BLS and NIOSH statistics apply to industries. But industry data combine blue- with white-collar deaths. Since blue-collar workers experience considerably higher death rates, the industry data are difficult to interpret.²⁷ Some analysts have suggested applying the industry data only to blue-collar workers.²⁸ If white-collar workers were exposed to the same amount of risk regardless of industry, their exclusion would not be troublesome. This is unlikely. For example, airplane pilots hold extremely hazardous white-collar jobs. The elevated risk of fatality within the air transportation industry is more likely the result of pilot deaths than ground crew or mechanic deaths.²⁹

Census of Fatal Occupational Injuries (CFOI)

Given the problems with the initial BLS surveys and the NTOF, the BLS is now conducting another large data gathering effort entitled the Census of Fatal Occupational Injuries (CFOI).³⁰ The CFOI comprises the third government study. Information is being gathered from death certificates, state WC reports, state coroner reports, OSHA reports, news media, toxicology reports, autopsies, and state motor vehicle reports. The data from the CFOI are not yet available to researchers. However, preliminary summaries of the CFOI have appeared.³¹ Findings include the following: the self-employed contribute 20 percent of all deaths; women contribute 8 percent; among broad occupation groups, operators,

fabricators, and laborers contribute the most (32%), while service occupations contribute the least (8%). In addition, transportation accidents, assaults, and violent acts contribute 57 percent.

By 1994 the CFOI will have information from all 50 states and the District of Columbia. The CFOI will undoubtedly be the best information available on occupational injury deaths. The CFOI has not been used to rank more than 50 occupations or industries; nor has CFOI information been used to consider causes of deaths within given occupations or industries. The published CFOI reports list roughly 25 possible causes of death. The SDS in this study contain 329 possible causes of death split into three categories: nature, source, and type. But the CFOI's flaw, for our purposes, is that it will not analyze diseases. Roughly 11 percent of deaths in the SDS data result from diseases such as asbestosis, silicosis, pneumoconiosis, heart failure and so on. Silicosis is a leading cause of death within 14 industries (Chapter 5). Silicosis and/or asbestosis are responsible for at least one death in 79 of 323 industries in Chapter 5. Silicosis or asbestosis are the leading causes of death in 12 occupations, including three that are in the top ten: stone cutters, blasters, and asbestos workers (Chapter 4). Silicosis is the leading cause of death in two of the top five industries: cut stone and iron ore (Chapter 5). The fact that the CFOI ignores diseases is, then, a serious flaw.

Private Studies

Two nongovernment American studies attempted to rank jobs according to death rates. Thaler and Rosen (1976) collected data from the United States Society of Actuaries and ranked 36 high-risk occupations by death rates. While these data have received considerable attention in the economics literature, they have a serious deficiency: the deaths are not clearly job-related. They confuse deaths from all causes with job-related deaths.³²

On the other hand, some of their provocative findings are consistent with this study's findings. Elevator operators and waiters were found to have death rates higher than sheriffs and police officers in Thaler and Rosen (1976). As we will see in our SDS/WC data, elevator operators do face a very high death rate, and although our waiters' rate does not exceed that of police officers, the waiters' rate is unexpectedly high.

A second study, conducted by the author,³³ ranks 347 occupations by job-related death rates. Some of the data in the initial 1987 study is re-analyzed in this study. This new study represents a significant advance over the 1987 study, which (1) does not indicate causes of death; (2) stops with 1980 data; (3) does not separately analyze women; (4) does not attempt a ranking for industries; (5) does not compare results with prior studies.

Government Data on Disease

A final government effort merits attention. The data are organized in reports that NIOSH makes available in the annual government volume *Health, United States*.³⁴ In recent years, this volume has included table entries on four occupational diseases known to cause death: mesothelioma, coalworkers' pneumoconiosis, asbestosis, and silicosis. In 1989, deaths were 365, 725, 261, and 130 respectively for these diseases. In addition, the 1988 issue of *Health, United States* indicates that a "substantial proportion of acute leukemia and bladder cancer cases are associated with occupational exposures" (p. 1).

The editors of *Health, United States* stop short of estimating the total number of deaths due to all occupational exposures. While most physicians acknowledge the clear link between occupations and mesothelioma, pneumoconiosis, asbestosis, and silicosis, many physicians dispute whether a particular occupational exposure to, say, benzene causes leukemia or exposure to naphthylamine or benzidine causes bladder cancer.

The 1991 edition of *Health, United States* indicates that lead exposure is excessive in several manufacturing industries including chemicals; stone, clay, and glass; fabricated metals; and machinery, especially electronic machinery (p. 217). Again, the government editors do not estimate the number of deaths due to on-the-job lead exposure, perhaps for the same reason. There is no consensus among physicians that lead exposure on-the-job is the only cause of death.

Occupational exposure to mercury is similar to exposure to lead. It first effects the nervous system and generates mood swings. With enough exposure over time, mercury or lead can result in death. A century ago, hatmakers who used mercury to treat fur showed signs of poisoning--hence the phrase "mad as a hatter."³⁵

The data in *Health, United States* pertain only to these handful of diseases (mesothelioma, coalminers' pneumoconiosis, asbestosis, silicosis, bladder cancer, and leukemia). Many researchers believe this view of occupational disease is too narrow. Many, perhaps most, cancer-causing substances are man-made.³⁶ Few studies have addressed the synergistic effects of exposure to multiple man-made substances. "Job strain" may also cause a significant percentage of all heart and cardiovascular disease.³⁷ Additionally, many manual jobs pay wages that place a family of three or more below the poverty line. To the extent that poverty destroys health, these jobs are somewhat culpable.³⁸ Many occupations such as bartending and merchant shipping have been linked to liver cirrhosis deaths,³⁹ but cirrhosis is seldom mentioned as job-related in the occupational disease literature. It probably should be. Cigarette smoking also shows clear patterns across jobs.⁴⁰ Waitresses and truck drivers tend to be heavy smokers. Yet, again, smoking is frequently ignored in the occupational illness literature.

No general ranking of many jobs by occupational disease deaths is available in any issue of *Health, United States* or any other publication.

Deaths from All Causes

Rosenberg et al. (1993) provide the most recent and comprehensive analysis of people's occupations and industries prior to death. Their study analyzed 269,797 death certificates from 12 states for 1984. Decedents must have been 20 years or older. Occupation and industry of the decedent were the "usual occupation" and "kind of business or industry" reported on the certificate and based on information provided by informants to the funeral director. While several hundred occupations and industries were available, Rosenberg et al. restricted attention to only 46 major occupations and 42 industries.

Proportionate mortality ratios (PMRs) were calculated and expressed using a 100 index. The ratios showed the proportion of deaths for a particular occupation or industry for a specific cause of death in relation to all other occupations and industries combined (represented by a PMR of 100). The PMRs were standardized by age and race.

For men, the highest PMR was for death from pneumoconiosis in the mining occupations. The second highest for men was again in mining occupations, but this time for industrial accidents. Other high PMRs included forestry, fishing, and hunting occupations for industrial accidents; teachers for melanoma of the skin; farming occupations for industrial accidents; administrative occupations for neoplasms of gallbladder; management occupations for neoplasms of the brain; electricians and power installers for industrial accidents; health occupations for malignant lymphoma; and military occupations for ulcers.

For women, the high PMRs and the corresponding causes of death were: machine operators, cancer of body and uterus; machine operators, brain cancer; professional specialty occupations, hodgkins disease; mail occupations, accidents; protective services, accidents; precision machine occupations, cancer of uterus; food production occupations, lung cancer; health service occupations, melanoma of skin; food preparation, mouth cancer.

For both men and women, high PMR industries and causes of death included: mining, pneumoconiosis; stone, clay, and glass, neoplasm of rectum and anus; and lumber, industrial accidents.

Rosenberg et al. (1993) list a number of limitations of their study. First, some occupations such as firefighter, pilot, and military are selective on health status. Persons must pass a medical exam to enter the occupation. Second, associations between jobs and deaths may reflect education level that in turn might influence the decedents' prior smoking or alcohol intake.

But the most important limitation for our purpose is the simplest. The Rosenberg et al. study looks at all causes of death, not just job-related deaths. While the Rosenberg et al. study is useful for drawing attention to certain jobs with high PMRs and certain causes of deaths, the study cannot be relied on as providing a list of dangerous jobs and causes of job-related deaths.

SUMMARY

Prior studies fall into three groups: foreign, regional U.S., and national U. S. Each study group suffers a number of drawbacks. The six national United States studies are the most relevant for our purposes.

This study makes a number of contributions to the literature. First, and perhaps most important, the causes of job-related death within any given occupation or industry are presented and analyzed. Second, occupations are analyzed at the 3-digit level, not 1- or 2-digit level. Third, numerator and denominator data are drawn from the same data bases for 1979 to 1986. No merging of separate data bases within the numerator or within the denominator was necessary. Fourth, aggregate deaths rates are calculated over four to six years, not just one year. Fifth, Appendices A and B provide the denominators and a detailed explanation for their calculation for every occupation or industry analyzed. Sixth, this study includes disease deaths.

The next chapter describes the data and method.

NOTES

1. See Pearce and Howard, 1985.
2. See Center for Disease Control, 1985.
3. See Seligman et al., 1987; Davis et al., 1987; Kraus, 1987; Davis, 1987; and Hales et al., 1988.
4. See Macon, 1984; Cotter and Macon, 1987; Personick and Jackson, 1992; and United States Bureau of Labor Statistics, 1989.
5. See United States Bureau of Labor Statistics, 1989.
6. See United States Bureau of Labor Statistics, 1989 and 1992.
7. See Bell et al., 1990.
8. See National Safety Council, 1993.
9. See Markowitz et al., 1989.
10. See Oleinick et al., 1993.
11. See Kane and Derstine, 1992.
12. See Kniesner and Leeth, 1991.
13. See Leigh, 1989.
14. See Mendeloff and Kagey, 1990.
15. See Brown, Hamilton, and Medoff, 1990.
16. See Marsh, 1993.
17. See Cimini and Becker, 1993.
18. See United States Bureau of Labor Statistics, 1991, pp. 7, 31.
19. See Smith, 1992.
20. See United States House of Representatives, 1988; Suruda and Emmett, 1988; and Burrough and Lubove, 1986.
21. See Bell and Denmead, 1993.

22. See Ruser and Smith, 1988.
23. See O'Loughlin, 1993.
24. See National Institute for Occupational Safety and Health, 1989, and Bell et al., 1990.
25. See National Center for Health Statistics, 1989.
26. See Runyon, Loomis, and Butts, 1994.
27. See Root and Sebastin, 1981.
28. See Smith, 1979.
29. See Personick, 1992c.
30. See Toscano, 1991, and Toscano and Windau, 1992.
31. See Toscano and Windau, 1992, and Cimini and Becker, 1993.
32. See Kusters, 1976.
33. See Leigh, 1987.
34. See National Center for Health Statistics, 1992 and 1988.
35. See Dobb, 1992.
36. See Epstein and Swartz, 1988.
37. See Karasek and Theorell, 1990, and Leigh, 1991.
38. See Menchik, 1993.
39. See Leigh and Jiang, 1993.
40. See Stellman et al., 1988, and Sterling and Weinkam, 1987.

Chapter 3

Data and Method

In subsequent chapters, information is provided on job-related deaths within occupations and industries, as well as the source, nature, and type of accident or illness associated with the deaths. This information is drawn from the Supplementary Data System (SDS) that was created by the Bureau of Labor Statistics (BLS) beginning in 1976.¹ The SDS data, in turn, are drawn from various states' Workers' Compensation (WC) records. Not all states in all years provided the SDS with information on job-related deaths, however. As a result, only eleven states are represented for the six years from 1979 through 1986: Arkansas 1981, 1983, 1985, 1986; Colorado, 1979-81, 1983, 1985; Delaware, 1979-81; 1983, 1985, 1986; Idaho, 1980, 1981; Iowa, 1981, 1983, 1985, 1986; Montana, 1979-81, 1983; New York, 1979-81, 1983, 1985, 1986; North Carolina, 1979-81, 1983, 1985, 1986; Oregon, 1983, 1985, 1986; Virginia, 1979; Wisconsin, 1979-81, 1983, 1985, 1986. These states contribute roughly 15 to 18 percent of the total national employment, depending on the year.

At the time of this study, 1986 was the most recent documented year available. In addition, it should be noted that the BLS did not add any data to the SDS for 1982 or 1984, and only recently did it release information from 1987 and 1988.

The BLS placed the data on six computer tapes, one per year. The tapes were purchased from the National Technical Information Service (NTIS) in Springfield, Virginia. The necessary data on deaths, occupations, industries, gender, as well as the source, nature, and type of accident or illness were read from the tapes by a mainframe computer. Smaller files were then created and analyzed on personal computers.

The remainder of this chapter describes (1) the SDS with special attention to the data required to generate death rates and causes of deaths; (2) the method involved in calculating the death rates.

DESCRIPTION OF THE SUPPLEMENTARY DATA SYSTEM (SDS)

The Supplementary Data System was organized by the Bureau of Labor Statistics in an attempt to gain more national information on occupational injuries and illnesses, using data from various states' Workers' Compensation records. The SDS uses data from the first report of injury or illness that employers, employees, physicians, or insurance companies submit to state Workers' Compensation agencies. Since employers, employees, and physicians must file WC claims under state law, the information does not impose any financial hardship on them.

Uniform information was gathered on the year of the claim, the case number, the year and month of the accident or illness, the U.S. Census Occupation Code, the Standard Industrial Classification (S.I.C.) Code for the industry, whether the job was in the public or private sector, the nature of the injury or illness, the part of the body affected, the source of the injury or illness, the type of accident or exposure, and the sex of the employee. The nature, source, and type of injury or illness are classified according to the American National Standards Institute Z16.2-1962 *Method of Recording Basic Facts Relating to the Nature of Occurrence of Work Injury*.²

The BLS investigators who organized the SDS believed that the data were representative of the nation.

By applying the percent of distribution of the SDS data to annual survey data, it is possible to arrive at estimated numbers of injuries and illnesses on a national basis by various characteristics. Despite differences in the number of cases among states, the percentage distributions of injuries and illnesses are relatively consistent across states--patterns that have been observed in several consecutive years of data for approximately 30 states. Observations, statistical tests, and the geographic and industrial diversity of the states (in the SDS) support the hypothesis that these data are representative of the national experience.³

Three files are available in the SDS. For this study, file no. 3, which includes fatalities and all "closed" cases (those not under appeal), was examined.

In the initial years of the SDS--1976, 1977, 1978--data were placed on different data tapes, depending on the states. In 1976, seven states provided information on deaths. Consequently, to analyze 1976 data requires purchasing seven tapes. But beginning in 1979, all of the data were placed on one tape for each year. Consequently, this study begins with 1979, in part because of the expense associated with purchasing over 25 tapes for years 1976 to 1978. Moreover, analysts responsible for the SDS in the BLS indicated some misgivings about data from the early years (1976-78). Even so, some data from BLS computer printouts covering 1977 and 1978 were analyzed in a preliminary study.⁴

The SDS investigators list two limitations of the SDS. First, WC coverage and reporting requirements reflect the differences in state WC laws. Complete descriptions of these state differences in WC laws are available.⁵ However, these reporting requirements are less likely to be divergent for deaths than for nonfatal injuries and illnesses. Second, the SDS, like the BLS reports from the 280,000 firms, suffers from the same low degree of identified illnesses.⁶ Recognition of occupational illness depends on the "state of the art." As medical knowledge increases, illness identification improves. A complete analysis of the limitations of the SDS is presented in Chapter 8.

The SDS data have been used in numerous BLS analyses. Perhaps the best introduction to the data is provided by Root and Sebastin (1981), who developed a job hazard index for roughly 60 occupations and 180 occupation and injury combinations. The index was created by accounting for the percent of total injuries contributed by a particular occupation or occupation-industry cell and dividing by the expected percent for that occupation or cell. They found that more than 95 percent of the injuries were not fatal. Occupations with the highest indexes were, in order, warehouse laborers, all other laborers, structural metal craftworkers, roofers, sheetmetal workers and apprentices, construction laborers, freight handlers, millwrights, and truck drivers. Root and Sebastin also found that, overall, blue-collar work was twice to eight times as hazardous as white-collar work, depending on the industry examined.

Root and Sebastin pointed out that railroad, maritime, farming, and private household service occupations were underrepresented in the SDS because these occupations were frequently excluded from workers' compensation insurance coverage in a number of states. Root and Sebastin, nevertheless, concluded that "our observations and tests, and the geographic and industrial diversity of the states included in this study, support our thesis that these data are representative of the national experience" (p. 27).

Several government studies have made extensive use of the SDS data. These studies typically address one industry and compare its injury and illness record to the average record for all industries. Specific industries that have been studied include fabricated structural metal,⁷ woodworking,⁸ longshore operations,⁹ roofing and sheetmetal,¹⁰ eating and drinking places,¹¹ mobile homes,¹² motor vehicle manufacturing,¹³ household appliances manufacturing,¹⁴ poultry plants,¹⁵ logging,¹⁶ oil and gas field services,¹⁷ airlines,¹⁸ and retail stores.¹⁹

For this study, data pertaining to the decedents' gender, occupation, industry, and source, nature, and type of injury or illness are taken from the six SDS computer tapes. Occupations are coded using the 1970 U.S. Census codes. During the years the SDS is available (1979-86), 1970 codes are used for 1979-83, even though only two years of data, 1985 and 1986, contain information using the 1980 codes. The 1970 codes were chosen since they corresponded to the four years available (1979-81, 1983) and since the BLS did not collect data

from 1982 or 1984. The drawbacks associated with restricting attention to years 1979-83 are indicated in Chapter 8.

Industries are coded according to the 1972 and 1977 Supplement to the Standard Industrial Classification (S.I.C.)²⁰ using 3-digit classifications. (Given the limited number of deaths, 4-digits would have been too narrow.) The same S.I.C. codes were used throughout 1979 to 1986. Consequently, industry data represent six years: 1979-81, 1983, 1985, 1986.

The guiding principle in selecting occupations and industries was to be as comprehensive as possible. The SDS information was generous: over 300 3-digit occupations and 400 3-digit industries were identified. There are no published tables that consistently provide employment (denominator) data for over 300 occupations and 400 industries. The most comprehensive published tables were combined with unpublished employment data from the BLS. All denominator data derived from the same BLS source.

METHOD

The calculation for an annual death rate within an occupation or industry involves a ratio. The number of deaths is in the numerator, and the estimated number of persons employed is in the denominator. The number of deaths is drawn directly from the SDS computer tapes, while the estimated number employed is drawn from two sources: (1) unpublished tables on occupation and industry employment that the BLS provided to the author; (2) tables from *Employment and Earnings* for industry employment. The occupation denominator data and some of the industry denominator data are drawn from unique tables, prepared by the BLS in March, May, and July 1993. These tables have never been published. The denominator data and corresponding calculations are provided in Appendix A for occupations and Appendix B for industries.

The death rate is easily understood if attention is restricted to a single occupation, say, airplane pilots. The calculation can be represented as in equation (1):

$$(1) \text{ death rate for pilots} = \frac{\sum_{t=1979}^{1983} \sum_{i=1}^I \text{Deaths}_{it}}{\sum_{t=1979}^{1983} \text{USEmp}_t \times \text{StatesPercent}_t}$$

where t = 1979, 1980, 1981, 1983. Capital "I" indicates the number of states and varies by year: seven in 1979; seven in 1980; nine in 1981; and nine in 1983. "Deaths_{it}" is the number of job-related deaths for pilots in the ith state in the tth

year. "USEmp_t" is the number of employed pilots in the year "t" for the United States. "StatesPercent" is the percent of national employment, contributed by the seven or nine states in year "t". The percentages of national employment and years are these: 17.11% (1979); 15.09% (1980); 17.11% (1981); 17.91% (1983). The 17.11% figure is the same in 1979 and 1981, despite the fact that information was not gathered from all of the same states in both years.

The numerator and denominator are summed over four years for the occupations and six years for the industries prior to the division. This is preferred over a separate technique that would have involved calculating a separate rate for each year and then summing yearly rates and finally dividing by four (or six). Even though the years are not equal in their contributions, a sum of four (or six) ratios would give equal weight to each year. And since more data are available, for example, in 1983 than 1980, the information from 1983 ought to be weighted more heavily than information from 1980. Equation (1) does exactly that by summing over the years prior to dividing.

The ratio in equation (1) is calculated for 263 occupations and 283 industries for which at least one death occurred. The industry calculations add information from 1985 and 1986.

Occupation employment data for the states are available only at the broad one-digit level and are not available every year.²¹ Detailed (3-digit) occupation information was available for nine regions in 1980 in a study that the U.S. Census labeled "provisional."²² But many 3-digit occupations were ignored in the regional analyses. Nevertheless, these provisional estimates²³ are used in the preliminary study.²⁴

Difficulties were encountered in attempting to obtain the denominator data. U.S. employment--or "USEmp" in equation (1)--for the occupations had to be derived from unpublished sources because government published statistics are either old, incomplete, or nonexistent. The best denominator data would have included employment with each of the 425, 1970 U.S. Census occupations for each state for each year. These data, however, are not available. The best available annual data for each year are in aggregate form for the U.S. in *Employment and Earnings*. But 198 of the 421 three-digit occupations are excluded from *Employment and Earnings*. These 198 are, for the most part, small occupations, that is, occupations with few incumbents. But "few" is relative. Longshore workers and stevedores are excluded from *Employment and Earnings* even though an estimated 57,900 persons were so employed in 1978.²⁵ Reliance on only the data from *Employment and Earnings* would have been too restricting.

Other sources are available. Employment information on *all* the 421 three-digit 1970 U.S. Census occupations has been only rarely published by the BLS. A "cross-walk" manual, cross tabulating 1970 codes with 1980 codes, contains information from 1970,²⁶ while an employment matrix contains information from 1978.²⁷

Because the U.S. Census changed its definitions of most occupations in 1980, government use of the 1970 definitions began to disappear by 1982. The author is unaware of any government publication listing employment within all 421 three-digit 1970 census occupations for the separate years 1979-81 and 1983 in this study. The unpublished lists obtained from the BLS do not provide 1970 Census code data for 1983. Consequently, the 1983 denominators were determined by multiplying by a growth factor of 1.0064 since employment in the U.S. grew by .64 percent from 1982 to 1983.

The denominator data for the industries were easier to obtain. Most are drawn from *Employment and Earnings*.²⁸ But the *Employment and Earnings* industry data are also incomplete. Again, the BLS provided unpublished employment data on a number of industries identified in Appendix B. And *Employment and Earnings* does not miss nearly as many industries (42) as occupations (198). Again, the data are national. To my knowledge no complete list of 3-digit industry employment is available for each state in each year.

The industry data, unlike the occupation data, are restricted to private sector employment. Consequently, government "industry" classifications--S.I.C. codes 910 through 972--are not included in this analysis. In death rate industry calculations, deceased persons identified as government employees prior to death are not analyzed. The industries corresponding to education (S.I.C. 821 through 829), consequently, include only personnel and teachers from private schools. This restriction is necessary because (1) the SDS identified decedents by S.I.C. code, not census code when recording industries, and (2) the BLS data on S.I.C. industries correspond to private employment only.

In the analysis of the aggregate SDS statistics in Chapter 6, however, all of the deceased from 1979 through 1986, working for private or public employers, are analyzed.

Four and six years of data, rather than one or two, are used to increase the stability of the estimates.

The data from the SDS and for the denominators are available for men and women separately.

Although the SDS tapes contain information on temporary and permanent disabilities, only information on fatalities is analyzed. A fatality, as a category, is less ambiguous than either a temporary or permanent disability, especially since the definition of disability varies across states.²⁹

Chapter 8 addresses the limitations of this study. A major limitation is due to relying on estimated rather than actual denominators. Future analyses of job-related deaths will be greatly improved if the federal government (1) regularly publishes annual average U.S. private and public employment for all 3-digit occupations and industries and (2) periodically publishes employment within all 3-digit occupations and industries for each state.

NOTES

1. See Root and Sebastin, 1981; U.S. Bureau of Labor Statistics, 1982, 1983; and U.S. Department of Labor, 1992.
2. See American National Standards, 1962.
3. See U.S. Bureau of Labor Statistics, 1982 and 1983.
4. See Leigh, 1987.
5. See U.S. Chamber of Commerce, 1980-87.
6. See Kane and Derstine, 1992, and National Research Council, 1987.
7. See Personick, 1991a.
8. See Personick and Biddle, 1989.
9. See Lettman, 1989.
10. See Personick, 1990a.
11. See Personick, 1991b.
12. See Personick and Daley, 1989.
13. See Jordan, 1992.
14. See Kane, 1992.
15. See Personick, 1992b.
16. See Personick, 1992a.
17. See Personick, 1992d.
18. See Personick, 1992c.
19. See Company and Personick, 1992.
20. See Statistical Policy Division, 1977.
21. See U.S. Bureau of the Census, 1984a.
22. See U.S. Bureau of the Census, 1984b.
23. See U.S. Bureau of the Census, 1984b.
24. See Leigh, 1987.
25. See U.S. Bureau of Labor Statistics, Department of Labor, 1978-86.
26. See U.S. Bureau of the Census, 1989.
27. See U.S. Department of Labor Statistics, Department of Labor, 1981.
28. See Bureau of Labor Statistics, 1979-86.
29. See Company and Personick, 1992.

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Chapter 4

The Occupation List

This chapter discusses a single list of 263 occupations, ranked by death rates with three categories for causes of death. These 263 have at least one death each. (Lists of occupations with zero deaths and five or more deaths are available in Appendices F and G). The three categories used to describe the causes of death differ. In the first, the causes of death refer to the *nature* of the injury or illness. In the second, the causes refer to the *source* of the injury or illness. The third uses the *type* of injury or illness. Table 4.1 includes information on nature and source only. Information on type is available in Appendix C. Information on the type category is not always useful, thus it was relegated to the appendix.

The rankings in Table 4.1 are not definitive. The rankings suffer from a number of limitations, as indicated in Chapter 8. They arguably represent the best national ranking currently available. Nevertheless, more data collection efforts are clearly warranted.

Non-zero rates are available for 263 occupations, and zero plus positive rates are available for 425 occupations. Occupations ranked from 1 to 212 are in the top half, and from 213 to 425 are the bottom half of the rates.

Table 4.1 contains 11 columns. The rank, 1970 U.S. Census code, and definition of the occupations appear in columns 1, 2, and 3. Columns 4 and 5 contain the number of deaths and the death rates, expressed as the number of deaths per 100,000 employed per year. Since both the numerator and denominator of the death rates combine data from the same four years, the death rate in column 5 is an annual rate.

The definitions in Table 4.1 are government categories. A few are sexist, for example, lumbermen, motormen, and so on. These terms are used in this book merely to remain consistent with government categories.

Columns 6, 7, and 8 pertain to the nature of the injury or illness. Within these columns each occupation is analyzed separately. The nature of the deaths within the particular occupation is ranked according to the frequency of deaths.

Consider, for example, lumbermen in occupation rank 3. Twenty-five of the 61 deaths are attributed to “Multiple injuries,” which is coded as 400 in the ANSI lists corresponding to “Nature of Injury or Illness.” Sixteen deaths are attributed to “Fracture,” which uses a 210 ANSI code number. “Contusion and crushing” account for six deaths. The “Nonclassifiable” category captures five deaths. “Concussion,” “Amputation,” “Asphyxia conditions,” “Heart conditions,” and “Other injury” are the remaining categories and account for nine deaths combined. Table 4.1 stops after listing as many nature categories as are available on the deaths for a particular occupation. Ties are broken by having the lowest numbered code take the higher position. For example, three blasters died from silicosis, one from contusion and one from fractures. “Contusion” is listed before “Fracture” because the former’s code number is 160 and the latter’s is 210. The sum of the deaths in column 8 is equal to or less than the number of deaths in column 4 for that particular occupation. Unfortunately, sometimes the WC record-keepers did not include information on the nature of the death or source in Table 4.1 (or type in Appendix C).

Columns 9, 10, and 11 are constructed in a similar manner to columns 6, 7, and 8. Columns 9, 10, and 11 rank deaths within occupations according to the ANSI source categories. Appendix C ranks deaths within occupations by ANSI type categories.

The categories cannot be directly compared across columns. Consider lumbermen again. In columns 6, 7, 8, deaths are attributed to multiple injuries, while 33 deaths are attributed to plants, trees, and vegetation in columns 9, 10, 11. We cannot infer from this that 25 multiple injuries had their source of death from plants, trees, and vegetation. Similarly we cannot conclude that the logs listed in columns 9, 10, 11 caused the 10 fractures noted in columns 6, 7, 8. As another example, notice that eleven stone cutters (position 1) died from silicosis in the nature category, yet silicosis is attributed to mineral items in five cases and unidentified particles in four cases. The remaining two silicosis cases are attributed to shears and silica in the source categories of columns 9, 10, 11. As a final example, consider blasters (position 6). Three died from silicosis in the nature category (columns 6, 7, 8). Two of these three have a source code indicating “silica” (columns 9, 10, 11), while the third apparently is listed under the source code for “mineral items.”

Some records are better than others. The nature, source, and type codes were probably not always accurately recorded; this is one reason all of the nature, source, and type codes and definitions are provided in Table 4.1 and Appendix E. The reader can make an independent judgment as to which was the true cause of death.

ANALYSIS OF OCCUPATIONS

The highest annual death rate at 297 per 100,000 per year belongs to U.S. Census Code 546: Stone Cutters and Carvers. This occupation includes hand molders (except jewelers), machine feeders and offbearers in rock quarries, sculptors, and craft-artists. Eleven deaths are recorded over the four years. The nature of the deaths (columns 6, 7, 8) suggest that all 11 died of silicosis. The source of the deaths (columns 9, 10, 11) suggests that ten of the eleven contracted the silicosis from mineral items or particles or silica. One apparently also died from shears (columns 9, 10, 11), which suggests an injury rather than silicosis. The type classification (Appendix C), on the other hand, indicates overexertion for the eleventh death. Again, there may be coding errors for the nature, source, and type categories. Nevertheless, Stone Cutters, Carvers, and Quarrymen have been found to have very high death rates in other studies.¹

This high rate for Stone Cutters is alarming. A recent State of New Jersey Health Department investigation revealed that most of the 53 firms using silica in New Jersey had inadequate or nonexistent air monitoring, respiratory protection, or employee training.²

Painter Apprentices have the second highest rate at 118 per 100,000 per year. Only one death occurred, however. This high ranking is clearly questionable. On the other hand, several apprentice categories appear high on the list, including Plumber Apprentices (rank 26), Sheetmetal Apprentices (rank 30), Electrician Apprentices (rank 39), and Carpenter Apprentices (rank 67). Moreover, Surveying Assistants (rank 11) and Therapy Assistants (rank 28) are also high on the list. This suggests that inexperienced employees may be similar to green troops who are notorious for their high casualty rates on the battlefield.³ Considerable evidence indicates that youth and inexperience are strongly correlated with on-the-job accidents.⁴ Economists also find support for this hypothesis in evidence that national injury rates and national unemployment are strongly and negatively correlated.⁵ The one Painter Apprentice apparently died falling from a scaffold (Appendix C).

Lumberjacks rank third. Sixty-one died over the four years, and their rate per 100,000 per year is 96. Their high rank compares favorably with the excessively high death rates noted in other studies.⁶ In the SDS data, Lumberjacks most frequently died from multiple injuries (columns 6, 7, 8) many of which, in turn, were caused by plants, trees, vegetation, logs, and wood items (columns 9, 10, 11). Data from Appendix C indicate that logs or trees fell on the Lumberjacks.

Motormen in Logging and Mines occupy position four with a rate of 94 per 100,000. Motormen drive vehicles, frequently electric powered, hauling timber, coal, rock, and minerals. It is not surprising that Motormen are likely to die from vehicle crashes and electric shock. In fact, almost all blue-collar occupations in mining and logging have been found to be extremely dangerous.⁷ Meng (1991)

finds that Motormen, inside and outside Logging and Mining, rank third in the death rate among Canadian workers.

Airplane Pilots rank fifth with a 90 per 100,000 death rate. Their high ranking is consistent with other studies.⁸ This Census definition includes all commercial pilots. Crop dusters, pilots who fly small jets for corporate executives and entertainers, pilots who train others to fly, pilots of planes that pull advertising banners, and helicopter pilots are included in this census category. Pilots in small commuter planes face greater risks than pilots in large airlines, according to a National Transportation Safety Board study.⁹ Helicopters are especially dangerous as the CDC study concludes.¹⁰ The deaths to all Airplane Pilots are most frequently due to crashes, as the information from columns 9, 10, 11 and Appendix C reveals.

Blasters occupy the sixth position with an annual rate of 85 per 100,000. Five deaths were recorded during the four years combined. Surprising results emerge from columns 6, 7, 8, 9, 10, and 11. Blasters more frequently die from silicosis and vehicle crashes than from explosions. In fact, in this SDS sample no Blasters died from explosions.

An important finding emerges with rank number seven. Miscellaneous Laborers have a 76 per 100,000 rate as 120 persons died over the four years. The sizes of the numerator and denominator of the rate are among the very largest of any occupation in the list. These large numbers for the numerator and the denominator suggest that the death rate for Miscellaneous Laborers is more reliable than for most other occupations. The reliability of the estimate, combined with the very high rank on the list, represents an important finding since popular (not necessarily scientific) opinions about which are the most dangerous jobs generally do not include Laborers. Lumberjack, Pilot, and Blaster are well-known hazardous jobs; Laborer is not well known.

The causes of the 120 Laborer deaths in Table 4.1 and Appendix C are revealing. They are similar to the causes of deaths for all persons in all jobs combined, as discussed in Chapter 6. Vehicle crashes (columns 9, 10, 11), heart conditions (columns 6, 7, 8), falls (columns 9, 10, 11), "Struck by, NEC" (Appendix C) are high on the laborer lists here and the "all worker" lists in Chapter 6. However, the nonclassifiable and miscellaneous causes of death categories are more frequently indicated for laborers than for all workers in Chapter 6.

The high ranking for Miscellaneous Laborers is not surprising to researchers, however. Most studies that attempt to rank more than a handful of occupations find that catch-all laborer categories generate very high death and nonfatal accident rates.¹¹

A similar finding emerges for Construction Laborers in position 25 and Not Specified Laborers in position 31. One hundred seventy-three Construction Laborer deaths occurred. Vehicle crashes, falls, heart conditions, contact with caustics by inhalation, and contact with electric current are high on the lists for causes of deaths. Even so, the public would probably not regard construction

labor or general labor as especially hazardous. Again, most researchers have found construction labor to be especially hazardous.¹² The high ranking for falls as a cause of death is not surprising. Sorock, Smith, and Goldoft (1993) found falls killed more Construction Workers than vehicle crashes in an analysis of 200 construction deaths in New Jersey. Burkhart et al. (1993) found Construction Laborers to be at high risk for tuberculosis, falls, submersion and suffocation, homicide, and cerebrovascular disease.

Urban Rail Conductors rank eighth. Four died, so the death rate is 76 per 100,000. They most often died from rail or highway vehicle mishaps that led to fractures or electric shock, according to columns 6, 7, 8, 9, 10, and 11. Urban Rail Conductor does not appear on prior lists of dangerous jobs. This may, in part, be due to definitions. Rail Conductors are also referred to as Motormen. Again, Motormen, Inside and Outside Logging and Mining, rank third in Canada.¹³ Consequently, Rail Conductors may not have received much prior attention because there are not many of them. For example, in a preliminary study, no denominator data was found for Urban Rail Conductor.¹⁴ Even so, Urban Rail Conductors have a relatively small denominator--5,538.

Teamsters are in position nine with a rate of 66 per 100,000. Only two died, however. Yet before this occupation is cast aside due to insufficient deaths, we should consider its closest relatives. In the 1980 Census Codes, Teamsters are defined as material moving equipment operators and heavy truck drivers. Moving Equipment Operators are found to have excessively high rates in at least two studies.¹⁵ Heavy Truck Drivers have also been found to have very high rates in many studies.¹⁶ Given its similarity to prior studies, the Teamsters ranking appears plausible.

The Asbestos Worker ranking at number 10 is not surprising. Twenty-one died, which generated a rate of 61 per 100,000. The majority died from asbestosis (Table 4.1). Two died from falls (Appendix C).

Survey Assistants rank eleventh with a rate of 56 per 100,000. Five died during the four years, three in vehicle accidents. Since these assistants are frequently employed on roads and highways to hold the measuring chains for surveying, this very high ranking is likely justified given the youth and inexperience of many Surveying Assistants.

Earth Drillers occupy position 12. Twenty deaths occurred, which generates a 55 per 100,000 death rate. The causes of death from columns 6, 7, 8, 9, 10, and 11 are understandable: mining and drilling machine mishaps, contact with electric current, and vehicle crashes. Somewhat surprisingly, silicosis and pneumonia killed three Earth Drillers. Nevertheless, Earth Drillers have been found to have very high death rates in other studies.¹⁷

Firefighters are in position 13. Seventy-seven deaths are recorded, resulting in a death rate of 51 per 100,000. Firefighting is one among a handful of jobs that are widely known to entail considerable danger. The interesting new data on Firefighters here pertains to the causes of death. Heart failure and highway vehicle crashes are ahead of flame, fire, and smoke in columns 9, 10, and 11.

For WC boards to recognize heart failure as job-related, a traumatic event must have preceded the heart failure: If heart failure occurs during, immediately after, or even within a day or two after a fire, WC boards are inclined to view the failures as job-related.¹⁸ Finally, columns 9, 10, 11 indicate that one Firefighter died of bullets.

Structural Metal Craftsmen rank 14th with 27 deaths and a rate of 50 per 100,000. Structural Metal Craftsmen are iron workers; they construct the iron beams that become the backbone of bridges and buildings. They work at dizzying heights. In columns 9, 10, 11, "ground" and "floor" are the most frequent sources of the deaths. These imply falls. The falls to a lower level and from a scaffold in Appendix C verify that implication. Unexpected causes of death include electric shock (3 deaths) and poisoning (1 death). Nevertheless, the overall danger associated with iron work has been widely acknowledged.¹⁹

Electric Power Linemen are in the 15th position with a rate of 44 per 100,000 from 34 deaths. Not surprisingly, Linemen die from electric shock (columns 6, 7, 8) and ground (columns 9, 10, 11), again implying falls (Appendix C). Linemen must also drive vehicles. Consequently, three highway vehicle deaths occurred (columns 9, 10, 11). Earlier, Linemen were found to have an even higher rate (147 per 100,000 death rate) in a Texas study.²⁰

Another surprising occupation appears in position 16: Garbage Collectors. Nineteen deaths occurred, resulting in a rate of 40 per 100,000. A look at the causes of death, especially in Appendix C, offers an explanation for this very high rank. Vehicles were responsible for 58 percent (11/19) of the deaths. Garbage Collectors, who frequently work early in the morning, must cross streets, and drunk drivers are notorious for their late night and early morning driving habits.

Miners, Not Elsewhere Classified (n.e.c.) are in position 17. Fifty-nine died, so the rate is roughly 40 per 100,000. There are no separate categories for coal miner or bauxite miner, and so on. Instead, this category in the U.S. Census includes all miners, regardless of the material being mined. Of these 59 deaths, only 20 died from disease or poisoning--silicosis, pneumoconiosis, pneumonia, and toxic systemic poisoning. The remaining 42 deaths resulted from injuries. This is probably a good estimate for the number of injuries within these 11 states during the four years. But, as explained in the introductory chapter, it is not a good estimate of the number of disease deaths. If the National Center for Health Statistics' (1992) estimates of black lung deaths are added to the 59, roughly 700 new deaths would have to be accounted for during 1979 to 1983, assuming these 7 to 11 states contributed 16 percent of the American workforce. The resulting death rate would then be 511 per 100,000, easily placing "Miner nec" at the top of the occupation list. In any case, the high ranking for Miners is consistent with many other studies.²¹

Technicians Not Elsewhere Classified (n.e.c.) attain rank 18. Seven deaths occurred, which generates a rate of 39.5 per 100,000. These Technicians died from burns, overexertion, systemic poisoning, carbon monoxide, and vehicle

crashes. The relatively few deaths and “not elsewhere classified” terminology make it difficult to draw conclusions from this ranking, especially since these jobs are not well known enough to merit their own U.S. Census category. The cause of death information suggests that some of these Technicians work with toxins.

Not Specified Mechanics rank 19th. Twenty-six died, resulting in a death rate of about 39. The “not specified” terminology creates problems for interpretation, but the reasonable numbers of deaths--26--and causes of death allow for some interpretations for this job. Trauma or overexertion resulted in heart failure and killed three to five (columns 6, 7, 8, 9, 10, 11). Heat burns killed two to three. Electric shock and highway vehicles killed two apiece. One died in an explosion (Appendix C).

The “not elsewhere classified” and “not specified” categories may be more usefully viewed as general laborers loosely connected to the occupation mentioned. It is likely that many of the decedents were young or recent hires and had not yet progressed to, for example, auto mechanics. They could merely be casual workers recently employed by an auto shop. If this speculation is true, then the “not elsewhere classified” and “not specified” categories can be explained by the correlation between youth and inexperience on the one hand, and accidents and injuries on the other. In any case, these high rankings for “not elsewhere classified,” “miscellaneous,” “not specified”, and “helpers” categories are important findings. Persons who fall into these categories, either because of their inexperience or weak labor market attachment, deserve additional study. Moreover, many of these jobs are apparently very hazardous, but we do not know what specific activities are involved that render them hazardous.

Elevator Operators occupy position 20 with four deaths and a rate of 39 per 100,000. Deaths involved conveyors, elevators, floor, and ground (columns 9, 10, 11). Two of these were falls, and another apparently resulted from the elevator falling on the operator. This occupation is rapidly becoming extinct.

A significant finding emerges with rank number 21. Four hundred eighty-nine (489) Truck Drivers died in the line of duty, yielding a rate of 38.8. No other occupation killed as many people. Given the size of the numerator and denominator (Appendix A), this rate ought to be among the most reliable in the occupation list. Popular (not scientific) opinion does not generally regard truck driving as especially hazardous. Yet the cause of the majority of deaths--vehicle crashes--suggests why the popular opinion is mistaken. Psychological evidence indicates that perception of control is crucial for the average person's evaluation of risk. A well-known “optimism bias” is pervasive in people's assessments of driving hazards.²² Most people believe that they are better than average drivers. If average means median, this belief is illogical if held by more than 50 percent of drivers. According to psychologists, this belief is held because drivers are “in control.” On the other hand, airline travel is regarded as hazardous because the traveler is not “in control,” that is, piloting the plane. Nevertheless, mile-for-mile, airline and train travel is far safer than motor vehicle travel.²³ Truck

Drivers probably believe they are “in control” of their trucks and, they reason, “in control” of the risks they face. The same view probably permeates the public mind. Hence truck driving is not generally regarded as dangerous by the public.

A similar phenomenon, to a lesser extent, is also present in the public mind when considering Taxi Drivers and Chauffeurs who rank 22nd. Drivers and Chauffeurs may reason that they are “in control” and hence not subject to vehicle collisions. But the denial of hazard is probably less for Taxi Drivers than Truck Drivers because of the well-known risk of murder to Taxi Drivers. Forty Taxi Drivers and Chauffeurs were killed, and the corresponding rate is 37.2. They most frequently died from vehicle crashes, bullets, and knives (columns 9, 10, 11). An unusual cause of death in columns 9, 10, 11 is “Another person.” Given the high murder rate for Taxi Drivers, it seems likely that this “Another person” should indicate a murder, perhaps without using a gun or knife. This high murder rate of Taxi Drivers has been noted in other studies. In a Texas study, the homicide rate for Taxi Drivers surpasses all other occupations and generates a 78 per 100,000 annual rate.²⁴

Nine Boilermakers died, yielding a 37.1 rate and a rank of 23. Electric shock and falls appear to account for most of the deaths, as indicated in columns 6, 7, 8, 9, 10, and 11.

Mechanics, Except Auto are ranked 24th. Only two deaths occurred, however. Nevertheless, the high ranking is consistent with that of Not Specified Mechanic in position 19. One died from inhaling halogenated compounds, while another died in a vehicle crash.

Construction Laborers round out the top 25 highest death rate occupations. One hundred and seventy-three (173) people died. Given that only Truck Drivers lists more killed, the rate of 32.9 is probably reliable. This is an important finding since, in the public mind, construction labor is not likely to be regarded as hazardous. The causes of death are understandable. The “Mineral items” in columns 9, 10, 11 and “Contact with . . . caustics by inhalation” in Appendix C probably result in the “Silicosis” and “Asbestosis” of columns 6, 7, 8. Highway vehicles, moving machines, forklifts, and towing vehicles together account for 35 deaths. Falls (ground, floor in columns 6, 7, 8) account for 23 deaths.

Many other occupations are surprising in their high rankings: Greasers (29), Knitters (35), Farm Product Buyers (36), Tailors (38). Not Specified Operatives (45), Millwrights (50), Deliverymen (52), Craftworkers n.e.c. (53), Sawyers (56), Bakers (59), Miscellaneous Operatives (60), Gas Station Attendants (62), Sales Managers (74), Recreation Attendants (75), Meter Readers (86).

A number of additional occupations merit interest. Geologists (rank 43) is one of the highest ranking professional jobs. Geologists most frequently die in aircraft and highway vehicle crashes.

More Police Officers (rank 47) die from highway vehicle crashes than from bullets (columns 9, 10, 11). The “Another person” source (columns 9, 10, 11) is likely the result of an attack by another person on a Police Officer. Although the

ANSI categories do not list suicide, some Police Officers undoubtedly fall into that category. Freedman (1990) reports on a case (not in the SDS) in which the North Carolina WC board ruled that an officer's suicide resulted from depression that was judged to be an occupational disease.

The plurality of the deaths for Gas Station Attendants (rank 62), Sales Managers (74), Restaurant Managers (142), Bank Tellers (238), Cashiers (226), and Secretaries (259) were from bullets. One out of the two Parking Attendant (96) deaths was caused by bullets. Again, these deaths must be judged to be job-related. If a husband-wife quarrel ends in a death while the wife happens to be working, it is not likely that the WC boards would judge it to be job-related. Consequently, most of the murders probably took place during robberies.

Farm work is generally regarded as relaxing, and Farmers are low on the list at 241. Yet Farm Laborers (rank 70) and Farm Foremen (rank 27) rank in the upper half on the list. Their sources of death are most frequently agricultural machine mishaps, highway vehicle crashes, and inhalation of caustics. Even so, both rates for Farmers and Farm Laborers are likely to be underestimated, perhaps greatly underestimated. Farm work has been shown to be especially hazardous in related studies.²⁵ Many of the self-employed are Farmers, and the self-employed contribute more than double their expected number of injury deaths in the CFOI data.²⁶ The underestimate is also partly due to the fact that the SDS data are drawn from WC boards. Most Farmers are self-employed and need not participate in WC systems.²⁷

Managers and Administrators Not Elsewhere Classified, nec (rank 120) as well as Restaurant and Bar Managers (142) are most likely to die from bullets. The second most popular cause of Manager and Administrator deaths is an aircraft accident (Appendix C). Lawyers (179) are most likely to die from bullets and aircraft crashes.

Airline Stewardesses (Flight Attendants) (54) probably provide a more accurate estimate of *Airline* Pilots deaths than the *Airplane* Pilots (rank 6).²⁸ Again, the *Airplane* Pilot category includes crop dusters, helicopter pilots, and corporate jet pilots.

Excavating Machine Operators are in position 40. They most often die from earth moving machine mishaps and vehicle crashes. Their death rate is 21.6 per 100,000. Excavating Machine Operators frequently help with hazardous waste cleanups authorized by the Environmental Protection Agency (EPA). Since the waste cleanups are designed to prevent cancers from developing in humans in the future, the EPA regularly calculates the number of cancer deaths that will be avoided by the cleanup. But the EPA calculations ignore the possible risk of injury deaths to, for example, Excavating Machine Operators, who may die while cleaning up the site.²⁹

Of interest is the fact that only one death occurred among Physicists and Astronomers (118). This death was the result of a blood disease from a radiating substance.

College Teachers, nec rank 88th. It is unlikely that this ranking applies to most College Teachers. The U.S. Census codes include categories for most College Teachers--Physics, English, Math, Economics, and so on. The nec next to College Teachers is critical here: it applies to College Teachers who would not be classified under the standard U.S. Census category of College Teacher. Most College Teacher categories have zero deaths (Appendix F).

Elementary School Administrators (139) are prone to die from job-related heart failure, while Bank Officers (186) die in airplane crashes, being struck by desks, or from vehicle crashes and bullets.

CLOSING REMARKS

Table 4.1 presents the occupations, ranked according to the death rates. Still, these may not allow for the quickest reference. The index lists occupations alphabetically and indicates the corresponding ranks in Table 4.1.

The rankings in Table 4.1 are compared with prior rankings from other studies in Chapter 8. The veracity of the rankings in Table 4.1 is also addressed in Chapter 8.

NOTES

1. See Pearce and Howard, 1985, and Meng, 1991.
2. See Minter, 1993a.
3. See Ellis, 1975, and Knapik et al., 1993.
4. See Mitchell, 1988; Goldberg et al., 1989; Chelius, 1979; Leigh, 1986; and Shannon et al., 1993.
5. See Smith, 1992.
6. See Personick, 1992a; Meng 1991; Pearce and Howard, 1985; Paulozzi, 1987; Leigh, 1987; and Cone et al., 1991.
7. See Root and Sebastin, 1981, and Paulozzi, 1987.
8. See Meng, 1991; Center for Disease Control, 1985; Leigh, 1987; and Pearce and Howard, 1985.
9. See *San Jose Mercury News*, Dec. 5, 1993.
10. See Center for Disease Control, 1985.
11. See Davis et al., 1987; Meng, 1991; Leigh, 1987; Pearce and Howard, 1985; and Root and Sebastin, 1981.
12. See Buskin and Paulozzi, 1987; Center for Disease Control, 1985; Leigh, 1987; Meng, 1991; and Root and Sebastin, 1991.
13. See Meng, 1991.
14. See Leigh, 1987.
15. See Kane and Derstine, 1992, and Center for Disease Control, 1985.

16. See Meng, 1991; Leigh, 1987; Kane and Derstine, 1992; Center for Disease Control, 1985; Root and Sebastin, 1981; and Davis et al., 1987.
17. See Meng, 1991; Center for Disease Control, 1985; Leigh, 1987; and Cone et al., 1991.
18. See Washburn, Harlow, and Fahy, 1987.
19. See Meng, 1991; Leigh, 1987; Center for Disease Control, 1985; and Root and Sebastin, 1981.
20. See Center for Disease Control, 1985.
21. See Reardon, 1993 and references therein.
22. See Slovic, Fischhoff, and Lichtenstein, 1979.
23. See Slovic, Fischhoff, and Lichtenstein, 1979.
24. See Davis, 1987.
25. See Purschwitz and Field, 1990, and Bell et al., 1990.
26. See Cimini and Becker, 1993.
27. See Rejda, 1984.
28. See Reardon, 1992.
29. See Hoskin et al., 1993.

Table 4.1

Male and Female Job Deaths within Occupations
 Ranked in Descending Order by Rate Of Deaths per 100,000 Workers
 With Frequencies of Deaths by Natures and Sources of Injury or Illness

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Number of Deaths</i>	<i>Rate per 100,000</i>	<i>Code</i>	<i>Definition</i>	<i>Number of Deaths</i>
1	546	Stone cutters and carvers	11	297.22	286	Silicosis	11
						4300 Mineral items, nonmetallic	5
						4600 Particles (unidentified)	4
						3850 Shears, slitters, slicers	1
						5200 Silica	1
2	511	Painter apprentices	1	118.48	400	Multiple injuries	1
3	761	Lumbermen, raftsmen, etc.	61	94.94	400	Multiple injuries	25
					210	Fracture	16
					160	Contusion, crushing	6
					999	Nonclassifiable	5
					140	Concussion	4
					100	Amputation or enucleation	1
					110	Asphyxia, strangulation	1
					580	Ill-defined conditions	1
					991	Heart conditions	1
					995	Other injury, n.e.c.	1
4	710	Motormen; logging, mine, etc.	7	94.25	120	Burn (heat)	1
					160	Contusion, crushing	1
					200	Electric shock	1
					210	Fracture	1
					400	Multiple injuries	1
					991	Heart conditions	1
					995	Other injury, n.e.c.	1
5	163	Airplane pilots	47	89.63	400	Multiple injuries	33
					999	Nonclassifiable	5
					210	Fracture	4
					120	Burn (heat)	3
					991	Heart conditions	2
6	603	Blasters and powdermen	5	84.88	286	Silicosis	3
					160	Contusion, crushing	1
						4300 Mineral items, nonmetallic	2
						5200 Silica	2
						4600 Particles (unidentified)	4
						3850 Shears, slitters, slicers	1
						5200 Silica	1
						5810 Ground	1
						4700 Plants, trees, vegetation	33
						5710 Logs	10
						5749 Wood items	6
						5620 Highway vehicles	3
						3300 Earth moving machines	2
						5635 Forklifts, stackers, etc.	2
						4020 Chains, ropes, cables	1
						4300 Mineral items, nonmetallic	1
						5638 Powered towing vehicles	1
						5810 Ground	1
						6010 Heart failure	1
						5638 Powered towing vehicles	2
						1599 Electrical apparatus	1
						1700 Flame, fire, smoke	1
						4700 Plants, trees, vegetation	1
						5620 Highway vehicles	1
						8800 Miscellaneous	1
						5610 Aircraft	43
						5810 Ground	2
						1700 Flame, fire, smoke	1
						5620 Highway vehicles	1
						4300 Mineral items, nonmetallic	2
						5200 Silica	2

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
6	603	Blasters and powdermen (Cont.)			210	Fracture	1
7	780	Miscellaneous laborers	120	76.16	400	Multiple injuries	26
					210	Fracture	17
					991	Heart conditions	15
					110	Asphyxia, strangulation	13
					999	Nonclassifiable	10
					120	Burn (heat)	7
					200	Electric shock	7
					160	Contusion, crushing	5
					995	Other injury, n.e.c.	4
					170	Cut, laceration, puncture	3
					286	Silicosis	3
					274	Influenza, pneumonia, etc.	2
					280	Pneumoconiosis	2
					990	Occupational disease	2
					100	Amputation or enucleation	1
					140	Concussion	1
					271	Toxic systemic poisoning	1
					283	Asbestosis	1
					5620	Highway vehicles	1
					5620	Highway vehicles	18
					9800	Nonclassifiable	9
					8800	Miscellaneous	7
					1700	Flame, fire, smoke	6
					4300	Mineral items, nonmetallic	5
					1515	Conductors	4
					2910	Water	4
					5635	Forklifts, stackers, etc.	4
					2610	Cranes, derricks	3
					2620	Elevators	3
					5801	Floor	3
					5810	Ground	3
					6010	Heart failure	3
					601	Barrels, kegs, drums	2
					630	Boxes, crates, cartons	2
					935	Carbon monoxide	2
					999	Chemicals and compounds	2
					1350	Powered conveyors	2
					3300	Earth moving machines	2
					3999	Machines	2
					4115	Beams, bars	2
					4120	Bullets	2
					4700	Plants, trees, vegetation	2
					5640	Rail vehicles	2
					201	Animals	1
					250	Insects	1
					660	Bundles, bales	1
					701	Buildings	1
					801	Brick	1
					910	Alkalies	1
					1520	Switches, circuit breakers	1
					1820	Grains and grain products	1
					2280	Scissors, shears	1
					2295	Wrench	1
					2500	Heating equipment	1
					3050	Agricultural machines	1
					3100	Buffers, sanders, grinders	1

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
7	780	Miscellaneous laborers (Cont.)						3250	Drilling, turning machines	1
								3350	Mining machinery	1
								3750	Saws	1
								4100	Metal items	1
								4125	Molds	1
								4600	Particles (unidentified)	1
								5300	Scrap, debris, waste	1
								5630	Industrial vehicles	1
								5631	Handtrucks, dollies, etc.	1
								5638	Powered towing vehicles	1
								5749	Wood items	1
								5899	Working surfaces	1
								6020	Another person	1
8	704	Urban rail conductors	4	72.23	210	Fracture	3	5640	Rail vehicles	2
					200	Electric shock	1	1515	Conductors	1
								5620	Highway vehicles	1
9	763	Teamsters	2	66.31	210	Fracture	2	701	Buildings	1
								5620	Highway vehicles	1
10	601	Asbestos workers	21	61.20	283	Asbestosis	17	4300	Mineral items, nonmetallic	17
					130	Burn (chemical)	1	950	Halogenated compounds	1
					210	Fracture	1	999	Chemicals and compounds	1
					570	Respiratory conditions	1	1930	Desks	1
					999	Nonclassifiable	1	5801	Floor	1
11	605	Surveying assistants	5	55.95	400	Multiple injuries	3	5620	Highway vehicles	4
					110	Asphyxia, strangulation	1	2910	Water	1
					160	Contusion, crushing	1			
12	614	Drillers, earth	20	54.53	400	Multiple injuries	5	3350	Mining machinery	3
					200	Electric shock	4	5620	Highway vehicles	3
					210	Fracture	4	3250	Drilling, turning machines	2
					160	Contusion, crushing	2	4140	Pipe	2
					286	Silicosis	2	4300	Mineral items, nonmetallic	2
					274	Influenza, pneumonia, etc.	1	4600	Particles (unidentified)	2
					991	Heart conditions	1	1515	Conductors	1
					999	Nonclassifiable	1	1599	Electrical apparatus	1
								2610	Cranes, derricks	1
								4110	Automobile parts (metal)	1
								5610	Aircraft	1

Table 4.1 (Cont.)

Occupation					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
12	614	Drillers, earth (Cont.)						5810	Ground	1
13	961	Firemen and fire protection	77	51.38	991	Heart conditions	34	6010	Heart failure	18
					400	Multiple injuries	11	5620	Highway vehicles	15
					110	Asphyxia, strangulation	8	1700	Flame, fire, smoke	12
					210	Fracture	8	9800	Nonclassifiable	8
					120	Burn (heat)	5	530	Pressure lines	3
					271	Toxic systemic poisoning	3	660	Bundles, bales	3
					170	Cut, laceration, puncture	1	5810	Ground	3
					190	Dislocation	1	400	Bodily motion	2
					200	Electric shock	1	799	Buildings and structures	2
					274	Influenza, pneumonia, etc.	1	950	Halogenated compounds	2
					310	Sprains, strains	1	935	Carbon monoxide	1
					510	Cerebrovascular conditions	1	999	Chemicals and compounds	1
					551	Malignant tumor	1	1599	Electrical apparatus	1
					999	Nonclassifiable	1	2400	Heat	1
								4120	Bullets	1
								5801	Floor	1
								5830	Sidewalks, paths, walkways	1
								5845	Street, road	1
								8800	Miscellaneous	1
14	550	Structural metal craftsmen	27	49.84	400	Multiple injuries	9	5810	Ground	6
					210	Fracture	5	5801	Floor	4
					991	Heart conditions	5	1515	Conductors	2
					200	Electric shock	3	4199	Metal items	2
					999	Nonclassifiable	2	6010	Heart failure	2
					160	Contusion, crushing	1	699	Containers	1
					190	Dislocation	1	705	Doors, gates	1
					271	Toxic systemic poisoning	1	740	Scaffolds, staging, etc.	1
								940	Carbon tetrachloride	1
								1700	Flame, fire, smoke	1
								2610	Cranes, derricks	1
								4115	Beams, bars	1
								4300	Mineral items, nonmetallic	1
								5660	Water vehicles	1
								5720	Lumber	1
								5845	Street, road	1
15	433	Electric power linemen	34	44.35	200	Electric shock	15	1515	Conductors	11
					400	Multiple injuries	6	5810	Ground	8

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
15	433	Electric power linemen (Cont.)			120	Burn (heat)	4	1510	Transformers, converters	3
					210	Fracture	3	1599	Electrical apparatus	3
					160	Contusion, crushing	2	5620	Highway vehicles	3
					991	Heart conditions	2	6010	Heart failure	2
					130	Burn (chemical)	1	755	Walls, fences	1
					999	Nonclassifiable	1	1520	Switches, circuit breakers	1
								1700	Flame, fire, smoke	1
								8800	Miscellaneous	1
16	754	Garbage collectors	19	40.42	400	Multiple injuries	8	5620	Highway vehicles	10
					210	Fracture	5	660	Bundles, bales	1
					991	Heart conditions	4	699	Containers	1
					999	Nonclassifiable	2	3300	Earth moving machines	1
								3999	Machines	1
								5699	Vehicles	1
								5801	Floor	1
								5810	Ground	1
								6010	Heart failure	1
								9800	Nonclassifiable	1
17	640	Miners, n.e.c.	59	39.70	400	Multiple injuries	17	4300	Mineral items, nonmetallic	19
					110	Asphyxia, strangulation	8	1140	Hydrocarbon gases	5
					210	Fracture	7	4600	Particles (unidentified)	4
					286	Silicosis	7	3250	Drilling, turning machines	3
					280	Pneumoconiosis	5	3350	Mining machinery	3
					271	Toxic systemic poisoning	4	930	Carbon dioxide	2
					999	Nonclassifiable	4	935	Carbon monoxide	2
					287	Other pneumoconioses	3	1101	Coal	2
					160	Contusion, crushing	2	4200	Mineral items, metallic	2
					200	Electric shock	1	5200	Silica	2
					572	Influenza, pneumonia	1	5620	Highway vehicles	2
								5810	Ground	2
								8800	Miscellaneous	2
								955	Metallic compounds	1
								2360	Screwdriver, bolt setter	1
								3300	Earth moving machines	1
								4030	Drums, pulleys, sheaves	1
								4199	Metal items	1
								5610	Aircraft	1
								5635	Forklifts, stackers, etc.	1

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
17	640	Miners, n.e.c. (Cont.)						5801	Floor	1
								9800	Nonclassifiable	1
18	173	Technicians, n.e.c.	7	39.53	120	Burn (heat)	2	1700	Flame, fire, smoke	2
					160	Contusion, crushing	1	935	Carbon monoxide	1
					271	Toxic systemic poisoning	1	1599	Electrical apparatus	1
					400	Multiple injuries	1	2230	Hammer, sledge, mallet	1
					510	Cerebrovascular conditions	1	3000	Machines	1
					991	Heart conditions	1	5620	Highway vehicles	1
19	495	Not specified mechanics	26	39.17	400	Multiple injuries	7	6010	Heart failure	3
					991	Heart conditions	5	1700	Flame, fire, smoke	2
					120	Burn (heat)	3	4199	Metal items	2
					200	Electric shock	2	5620	Highway vehicles	2
					271	Toxic systemic poisoning	2	400	Bodily motion	1
					110	Asphyxia, strangulation	1	630	Boxes, crates, cartons	1
					130	Burn (chemical)	1	900	Chemicals	1
					140	Concussion	1	905	Alcohols	1
					170	Cut, laceration, puncture	1	935	Carbon monoxide	1
					190	Dislocation	1	1350	Powered conveyors	1
					310	Sprains, strains	1	1515	Conductors	1
					995	Other injury, n.e.c.	1	2620	Elevators	1
								2910	Water	1
								4120	Bullets	1
								4130	Molten metal	1
								5635	Forklifts, stackers, etc.	1
								5801	Floor	1
								5810	Ground	1
								5845	Street, road	1
								6210	Tires	1
								8800	Miscellaneous	1
20	943	Elevator operators	4	39.01	400	Multiple injuries	2	1300	Conveyors	1
					160	Contusion, crushing	1	2620	Elevators	1
					210	Fracture	1	5801	Floor	1
								5810	Ground	1
21	715	Truck drivers	489	38.76	400	Multiple injuries	194	5620	Highway vehicles	315
					210	Fracture	84	6010	Heart failure	25
					991	Heart conditions	83	9800	Nonclassifiable	19
					999	Nonclassifiable	35	1700	Flame, fire, smoke	8
					120	Burn (heat)	17	2610	Cranes, derricks	8

Table 4.1 (Cont.)

Occupation		Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code Definition	Deaths	Rate	Code Definition	Deaths	Code Definition	Deaths
21	715 Truck drivers (Cont.)			160 Contusion, crushing	17	660 Bundles, bales	7
				110 Asphyxia, strangulation	12	5810 Ground	7
				200 Electric shock	11	630 Boxes, crates, cartons	6
				170 Cut, laceration, puncture	10	600 Boxes, containers, packages	4
				995 Other injury, n.e.c.	6	5710 Logs	4
				271 Toxic systemic poisoning	5	601 Barrels, kegs, drums	3
				310 Sprains, strains	4	699 Containers	3
				100 Amputation or enucleation	3	1999 Furniture, fixtures	3
				140 Concussion	3	2910 Water	3
				510 Cerebrovascular conditions	3	4120 Bullets	3
				270 Systemic poisoning	1	5638 Powered towing vehicles	3
				572 Influenza, pneumonia	1	5640 Rail vehicles	3
						5801 Floor	3
						5845 Street, road	3
						8800 Miscellaneous	3
						530 Pressure lines	2
						670 Tanks, bins, etc.	2
						1515 Conductors	2
						3300 Earth moving machines	2
						4300 Mineral items, nonmetallic	2
						4700 Plants, trees, vegetation	2
						5631 Handtrucks, dollies, etc.	2
						5635 Forklifts, stackers, etc.	2
						5720 Lumber	2
						5730 Skids, pallets	2
						5899 Working surfaces	2
						201 Animals	1
						250 Insects	1
						400 Bodily motion	1
						510 Pressurized containers	1
						665 Reels, rolls	1
						705 Doors, gates	1
						935 Carbon monoxide	1
						950 Halogenated compounds	1
						999 Chemicals and compounds	1
						1120 Crude, fuel oil	1
						1130 Liquid hydrocarbons	1
						1180 Naphtha solvents	1
						1190 Asphalts and road oils	1

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
21	715	Truck drivers (Cont.)						1400	Drugs and medicines	1
								1500	Electric apparatus	1
								1501	Motors	1
								1820	Grains and grain products	1
								2000	Glass items	1
								2215	Crowbar, pry bar	1
								2230	Hammer, sledge, mallet	1
								2245	Knife	1
								2270	Rope, chain	1
								2290	Shovel, spade	1
								2620	Elevators	1
								3200	Crushing machines	1
								3400	Office machines	1
								4115	Beams, bars	1
								4140	Pipe	1
								5070	Arc-welding equipment	1
								5500	Textile items	1
								5610	Aircraft	1
								5800	Working surfaces	1
								5840	Stairs, steps	1
								6210	Tires	1
22	714	Taxi drivers and chauffeurs	40	37.23	170	Cut, laceration, puncture	19	5620	Highway vehicles	17
					991	Heart conditions	8	4120	Bullets	16
					400	Multiple injuries	4	2245	Knife	3
					210	Fracture	3	6010	Heart failure	2
					995	Other injury, n.e.c.	2	6020	Another person	1
					999	Nonclassifiable	2	6210	Tires	1
					160	Contusion, crushing	1			
					310	Sprains, strains	1			
23	404	Boilermakers	9	37.10	200	Electric Shock	2	5801	Floor	3
					210	Fracture	2	1599	Electrical Apparatus	2
					120	Burn (heat)	1	2500	Heating equipment	1
					271	Toxic systemic poisoning	1	4300	Mineral items, nonmetallic	1
					283	Asbestosis	1	4600	Particles (unidentified)	1
					400	Multiple injuries	1	6010	Heart failure	1
					572	Influenza, pneumonia	1			
24	491	Mechanic, except auto	2	35.07	110	Asphyxia, strangulation	1	950	Halogenated compounds	1
					400	Multiple injuries	1	5620	Highway vehicles	1

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
25	751	Construction laborers	173	32.89	400	Multiple injuries	64
					210	Fracture	25
					991	Heart conditions	20
					200	Electric shock	14
					110	Asphyxia, strangulation	13
					999	Nonclassifiable	9
					286	Silicosis	6
					120	Burn (heat)	3
					160	Contusion, crushing	3
					170	Cut, laceration, puncture	3
					240	Effects of heat exposure	3
					283	Asbestosis	3
					310	Sprains, strains	3
					510	Cerebrovascular conditions	2
					140	Concussion	1
					990	Occupational disease	1
					4300	Mineral items, nonmetallic	28
					5620	Highway vehicles	24
					5810	Ground	15
					5801	Floor	8
					3300	Earth moving machines	6
					9800	Nonclassifiable	6
					1515	Conductors	5
					1700	Flame, fire, smoke	5
					2910	Water	5
					6010	Heart failure	5
					8800	Miscellaneous	4
					701	Buildings	3
					2400	Heat	3
					4600	Particles (unidentified)	3
					5635	Forklifts, stackers, etc.	3
					5720	Lumber	3
					5899	Working surfaces	3
					530	Pressure lines	2
					755	Walls, fences	2
					820	Drain tile, sewer pipe ,etc.	2
					1599	Electrical apparatus	2
					2290	Shovel, spade	2
					2620	Elevators	2
					4140	Pipe	2
					4930	Pumps	2
					5638	Powered towing vehicles	2
					5800	Working surfaces	2
					400	Bodily motion	1
					665	Reels, rolls	1
					699	Containers	1
					705	Doors, gates	1
					799	Buildings and structures	1
					801	Brick	1
					999	Chemicals and compounds	1
					1300	Conveyors	1
					1500	Electric apparatus	1
					2230	Hammer, sledge, mallet	1
					2299	Hand tools, not powered	1
					2300	Hand tools, powered	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
25	751	Construction laborers (Cont.)						2399	Hand tools, powered	1
								2610	Cranes, derricks	1
								3001	Agitators, mixers, etc.	1
								3200	Crushing machines	1
								3350	Mining machinery	1
								3999	Machines	1
								4115	Beams, bars	1
								4120	Bullets	1
								4199	Metal items	1
								5631	Handtrucks, dollies, etc.	1
								5640	Rail vehicles	1
								5845	Street, road	1
26	523	Plumber apprentices	3	32.73	200	Electric shock	1	2355	Saw	1
					572	Influenza, pneumonia	1	2700	Infectious parasites	1
					991	Heart conditions	1	6010	Heart failure	1
27	821	Farm foremen	7	32.49	160	Contusion, crushing	2	201	Animals	2
					120	Burn (beat)	1	1700	Flame, fire, smoke	1
					170	Cut, laceration, puncture	1	3850	Shears, slitters, slicers	1
					210	Fracture	1	4120	Bullets	1
					400	Multiple injuries	1	5638	Powered towing vehicles	1
					999	Nonclassifiable	1	5810	Ground	1
28	84	Therapy assistants	2	31.53	330	Hepatitis	1	2700	Infectious parasites	1
					572	Influenza, pneumonia	1	4300	Mineral items, nonmetallic	1
29	642	Greasers, except auto	8	30.74	400	Multiple injuries	2	2610	Cranes, derricks	3
					991	Heart conditions	2	4300	Mineral items, nonmetallic	2
					160	Contusion, crushing	1	1515	Conductors	1
					200	Electric shock	1	2270	Rope, chain	1
					210	Fracture	1	6010	Heart failure	1
					310	Sprains, strains	1			
30	536	Sheetmetal apprentices	1	29.62	400	Multiple injuries	1	5801	Floor	1
31	785	Not specified laborers	61	28.43	400	Multiple injuries	12	5620	Highway vehicles	7
					991	Heart conditions	12	9800	Nonclassifiable	5
					210	Fracture	9	4300	Mineral items, nonmetallic	4
					110	Asphyxia, strangulation	6	1350	Powered conveyors	3
					999	Nonclassifiable	4	2910	Water	3
					160	Contusion, crushing	3	5635	Forklifts, stackers, etc.	3
					170	Cut, laceration, puncture	3	5710	Logs	3

Table 4.1 (Cont.)

Occupation				Nature Of Injury Or Illness		Source Of Injury Or Illness				
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths			
31	785	Not specified laborers (Cont.)			120	Burn (heat)	2	5801	Floor	3
					200	Electric shock	2	630	Boxes, crates, cartons	2
					510	Cerebrovascular conditions	2	2290	Shovel, spade	2
					140	Concussion	1	3300	Earth moving machines	2
					190	Dislocation	1	5631	Handtrucks, dollies, etc.	2
					271	Toxic systemic poisoning	1	5640	Rail vehicles	2
					274	Influenza, pneumonia, etc.	1	5810	Ground	2
					551	Malignant tumor	1	6010	Heart failure	2
					995	Other injury, n.e.c.	1	8800	Miscellaneous	2
								660	Bundles, bales	1
								901	Acids	1
								950	Halogenated compounds	1
								1120	Crude, fuel oil	1
32	412	Bulldozer operators	20	28.39				1515	Conductors	1
								2245	Knife	1
								2610	Cranes, derricks	1
								3750	Saws	1
								3999	Machines	1
								4115	Beams, bars	1
								4160	Metal binders	1
								4700	Plants, trees, vegetation	1
								5800	Working surfaces	1
								5840	Stairs, steps	1
								3300	Earth moving machines	8
								4700	Plants, trees, vegetation	2
								5638	Powered towing vehicles	2
			9800	Nonclassifiable	2					
33	965	Sheriffs and bailiffs	13	27.94	210	Fracture	8	5300	Scrap, debris, waste	1
					400	Multiple injuries	4	5620	Highway vehicles	1
					991	Heart conditions	4	5635	Forklifts, stackers, etc.	1
					160	Contusion, crushing	3	5699	Vehicles	1
					999	Nonclassifiable	1	5710	Logs	1
								8800	Miscellaneous	1
								5620	Highway vehicles	4
								4120	Bullets	3
								6010	Heart failure	3
								755	Walls, fences	1
								2245	Knife	1

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
33	965	Sheriffs and bailiffs (Cont.)						5610	Aircraft	1
34	503	Molders, metal	9	26.07	286	Silicosis	4	4300	Mineral items, nonmetallic	2
					120	Burn (heat)	1	5200	Silica	2
					210	Fracture	1	900	Chemicals	1
					572	Influenza, pneumonia	1	4130	Molten metal	1
					990	Occupational disease	1	4140	Pipe	1
					991	Heart conditions	1	4800	Plastic items	1
								6010	Heart failure	1
35	671	Knitters, loopers, etc.	4	25.39	210	Fracture	2	5500	Textile items	1
					570	Respiratory conditions	1	5800	Working surfaces	1
					991	Heart conditions	1	5801	Floor	1
								6010	Heart failure	1
36	203	Buyers, farm products	3	24.39	400	Multiple injuries	2	5620	Highway vehicles	2
					210	Fracture	1	701	Buildings	1
37	666	Stationary firemen	11	23.25	210	Fracture	3	1700	Flame, fire, smoke	2
					991	Heart conditions	2	699	Containers	1
					120	Burn (heat)	1	755	Walls, fences	1
					160	Contusion, crushing	1	2610	Cranes, derricks	1
					274	Influenza, pneumonia, etc.	1	3400	Office machines	1
					286	Silicosis	1	4600	Particles (unidentified)	1
					400	Multiple injuries	1	5635	Forklifts, stackers, etc.	1
					572	Influenza, pneumonia	1	5800	Working surfaces	1
								8800	Miscellaneous	1
								9800	Nonclassifiable	1
38	551	Tailors	4	22.66	991	Heart conditions	2	665	Reels, rolls	1
					170	Cut, laceration, puncture	1	2245	Knife	1
					400	Multiple injuries	1	5500	Textile items	1
								6020	Another person	1
39	431	Electrician apprentices	4	22.05	200	Electric shock	3	1500	Electric apparatus	1
					170	Cut, laceration, puncture	1	1520	Switches, circuit breakers	1
								2260	Pliers, tongs	1
								4120	Bullets	1
40	436	Excavating machine operators	62	21.58	400	Multiple injuries	24	3300	Earth moving machines	23
					160	Contusion, crushing	12	5620	Highway vehicles	7
					210	Fracture	7	5810	Ground	4
					110	Asphyxia, strangulation	4	2910	Water	3
					991	Heart conditions	4	4300	Mineral items, nonmetallic	3

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
40	436	Excavating machine operators (Cont.)			999	Nonclassifiable	4	6010	Heart failure	3
					200	Electric shock	3	9800	Nonclassifiable	3
					271	Toxic systemic poisoning	2	2610	Cranes, derricks	2
					140	Concussion	1	5899	Working surfaces	2
					570	Respiratory conditions	1	250	Insects	1
								670	Tanks, bins, etc.	1
								935	Carbon monoxide	1
								1515	Conductors	1
								2320	Hammer, tamper	1
								2620	Elevators	1
								3050	Agricultural machines	1
								3350	Mining machinery	1
								4700	Plants, trees, vegetation	1
								5631	Handtrucks, dollies, etc.	1
								5638	Powered towing vehicles	1
								5845	Street, road	1
41	963	Marshals and constables	1	20.51	400	Multiple injuries	1	999	Chemicals and compounds	1
42	492	Miscellaneous mechanics	34	20.35	400	Multiple injuries	12	5620	Highway vehicles	6
					991	Heart conditions	8	5801	Floor	5
					210	Fracture	5	4199	Metal items	2
					999	Nonclassifiable	3	5810	Ground	2
					120	Burn (heat)	2	699	Containers	1
					110	Asphyxia, strangulation	1	705	Doors, gates	1
					200	Electric shock	1	1599	Electrical apparatus	1
					283	Asbestosis	1	1700	Flame, fire, smoke	1
					510	Cerebrovascular conditions	1	1901	Cabinets, bookcases, etc.	1
								2200	Hand tools, not powered	1
								2295	Wrench	1
								2910	Water	1
								3000	Machines	1
								3550	Planers, shapers, molders	1
								3600	Presses (not printing)	1
								4300	Mineral items, nonmetallic	1
								5070	Arc-welding equipment	1
								5400	Steam	1
								5635	Forklifts, stackers, etc.	1
								5699	Vehicles	1
								6010	Heart failure	1

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
42	492	Miscellaneous mechanics (Cont.)						8800	Miscellaneous	1
								9800	Nonclassifiable	1
43	51	Geologists	6	19.30	400	Multiple injuries	4	5620	Highway vehicles	3
					110	Asphyxia, strangulation	2	5610	Aircraft	2
								2910	Water	1
44	802	Farm managers	5	19.29	110	Asphyxia, strangulation	3	5620	Highway vehicles	2
					210	Fracture	2	900	Chemicals	1
								999	Chemicals and compounds	1
								3300	Earth moving machines	1
45	695	Not specified operatives	22	18.34	120	Burn (heat)	5	1700	Flame, fire, smoke	2
					210	Fracture	4	5200	Silica	2
					280	Pneumoconiosis	2	5620	Highway vehicles	2
					400	Multiple injuries	2	5801	Floor	2
					999	Nonclassifiable	2	630	Boxes, crates, cartons	1
					110	Asphyxia, strangulation	1	670	Tanks, bins, etc.	1
					160	Contusion, crushing	1	900	Chemicals	1
					200	Electric shock	1	1599	Electrical apparatus	1
					250	Hernia, rupture	1	2500	Heating equipment	1
					286	Silicosis	1	2999	Other liquids	1
					551	Malignant tumor	1	3300	Earth moving machines	1
					991	Heart conditions	1	4130	Molten metal	1
								4300	Mineral items, nonmetallic	1
								5400	Steam	1
								5635	Forklifts, stackers, etc.	1
								5899	Working surfaces	1
								6210	Tires	1
								9800	Nonclassifiable	1
46	534	Roofers and slaters	17	18.21	210	Fracture	7	5810	Ground	7
					400	Multiple injuries	5	5620	Highway vehicles	4
					160	Contusion, crushing	2	660	Bundles, bales	1
					510	Cerebrovascular conditions	2	740	Scaffolds, staging, etc.	1
					991	Heart conditions	1	2200	Hand tools, not powered	1
								2699	Hoisting apparatus	1
								5800	Working surfaces	1
								5830	Sidewalks, paths, walkways	1
47	964	Policemen and detectives	61	18.09	170	Cut, laceration, puncture	21	5620	Highway vehicles	19
					400	Multiple injuries	16	4120	Bullets	18

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
47	964	Policemen and detectives (Cont.)			991	Heart conditions	9	6010	Heart failure	8
					210	Fracture	8	8800	Miscellaneous	3
					999	Nonclassifiable	2	5610	Aircraft	2
					110	Asphyxia, strangulation	1	6020	Another person	2
					190	Dislocation	1	705	Doors, gates	1
					310	Sprains, strains	1	2700	Infectious parasites	1
					330	Hepatitis	1	2910	Water	1
					510	Cerebrovascular conditions	1	5699	Vehicles	1
								5801	Floor	1
								5810	Ground	1
								5840	Stairs, steps	1
								5899	Working surfaces	1
								9800	Nonclassifiable	1
48	424	Crane and derrick operators	17	17.68	400	Multiple injuries	10	2610	Cranes, derricks	7
					210	Fracture	3	3300	Earth moving machines	2
					160	Contusion, crushing	1	5620	Highway vehicles	2
					200	Electric shock	1	5810	Ground	2
					991	Heart conditions	1	665	Reels, rolls	1
					999	Nonclassifiable	1	4300	Mineral items, nonmetallic	1
								5638	Powered towing vehicles	1
								5700	Wood items	1
49	20	Mining engineers	1	17.46	210	Fracture	1	530	Pressure lines	1
50	502	Millwrights	12	17.40	400	Multiple injuries	3	4300	Mineral items, nonmetallic	2
					210	Fracture	2	670	Tanks, bins, etc.	1
					110	Asphyxia, strangulation	1	705	Doors, gates	1
					140	Concussion	1	1501	Motors	1
					200	Electric shock	1	2610	Cranes, derricks	1
					280	Pneumoconiosis	1	3000	Machines	1
					510	Cerebrovascular conditions	1	3750	Saws	1
					551	Malignant tumor	1	4140	Pipe	1
					991	Heart conditions	1	5635	Forklifts, stackers, etc.	1
								5801	Floor	1
								5810	Ground	1
51	750	Carpenters' helpers	7	17.22	210	Fracture	3	710	Bridges	1
					240	Effects of heat exposure	1	2400	Heat	1
					310	Sprains, strains	1	4199	Metal items	1
					400	Multiple injuries	1	5700	Wood items	1
					991	Heart conditions	1	5801	Floor	1

Table 4.1 (Cont.)

<i>Occupation</i>					<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
51	750	Carpenters' helpers (Cont.)						5810	Ground	1
								8800	Miscellaneous	1
52	705	Deliverymen and routemen	64	16.63	991	Heart conditions	22	5620	Highway vehicles	29
					400	Multiple injuries	17	630	Boxes, crates, cartons	7
					170	Cut, laceration, puncture	7	4120	Bullets	6
					210	Fracture	6	9800	Nonclassifiable	5
					999	Nonclassifiable	6	6010	Heart failure	4
					160	Contusion, crushing	2	5631	Handtrucks, dollies, etc.	3
					510	Cerebrovascular conditions	2	530	Pressure lines	2
					120	Burn (heat)	1	660	Bundles, bales	1
					990	Occupational disease	1	699	Containers	1
								710	Bridges	1
								1999	Furniture, fixtures	1
								2270	Rope, chain	1
								5640	Rail vehicles	1
								5801	Floor	1
								8800	Miscellaneous	1
53	571	Craft workers, n.e.c.	7	15.74	210	Fracture	4	5810	Ground	2
					200	Electric shock	1	1350	Powered conveyors	1
					400	Multiple injuries	1	1510	Transformers, converters	1
					991	Heart conditions	1	5620	Highway vehicles	1
								5801	Floor	1
								6010	Heart failure	1
54	931	Airline stewardesses	5	15.70	400	Multiple injuries	4	5610	Aircraft	5
					999	Nonclassifiable	1			
55	535	Sheetmetal workers	16	15.41	210	Fracture	5	5620	Highway vehicles	3
					400	Multiple injuries	5	5801	Floor	2
					200	Electric shock	2	5810	Ground	2
					991	Heart conditions	2	5820	Roofs	2
					160	Contusion, crushing	1	9800	Nonclassifiable	2
					999	Nonclassifiable	1	1599	Electrical apparatus	1
								2315	Drill	1
								2830	Movable ladders	1
								4199	Metal items	1
								5830	Sidewalks, paths, walkways	1
56	662	Sawyers	12	15.00	400	Multiple injuries	5	3750	Saws	2
					210	Fracture	4	4700	Plants, trees, vegetation	2

Table 4.1 (Cont.)

<i>Occupation</i>					<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
56	662	Sawyers (Cont.)			160	Contusion, Crushing	1	5710	Logs	2
					200	Electric shock	1	1350	Powered conveyors	1
					995	Other injury, n.e.c.	1	1599	Electrical apparatus	1
								2610	Cranes, derricks	1
								3999	Machines	1
								5720	Lumber	1
								5749	Wood items	1
57	635	Metal platers	3	14.65	130	Burn (chemical)	1	901	Acids	1
					270	Systemic poisoning	1	910	Alkalies	1
					274	Influenza, pneumonia, etc.	1	945	Cyanide, cyanogen compounds	1
58	435	Engravers, except photo	1	14.17	274	Influenza, pneumonia, etc.	1	901	Acids	1
59	402	Bakers	13	13.70	991	Heart conditions	6	1820	Grains and grain products	4
					274	Influenza, pneumonia, etc.	2	699	Containers	2
					572	Influenza, pneumonia	2	9800	Nonclassifiable	2
					170	Cut, laceration, puncture	1	630	Boxes, crates, cartons	1
					210	Fracture	1	4120	Bullets	1
					400	Multiple injuries	1	4600	Particles (unidentified)	1
								5840	Stairs, steps	1
								6020	Another person	1
60	694	Miscellaneous operatives	69	13.44	210	Fracture	13	5620	Highway vehicles	8
					991	Heart conditions	13	5801	Floor	8
					400	Multiple injuries	11	1700	Flame, fire, smoke	6
					120	Burn (heat)	6	999	Chemicals and compounds	3
					286	Silicosis	5	4300	Mineral items, nonmetallic	3
					999	Nonclassifiable	4	4600	Particles (unidentified)	3
					160	Contusion, crushing	3	5635	Forklifts, stackers, etc.	3
					274	Influenza, pneumonia, etc.	3	5810	Ground	3
					170	Cut, laceration, puncture	2	6010	Heart failure	3
					200	Electric shock	2	9800	Nonclassifiable	3
					283	Asbestosis	2	660	Bundles, bales	2
					110	Asphyxia, strangulation	1	699	Containers	2
					130	Burn (chemical)	1	2620	Elevators	2
					140	Concussion	1	5200	Silica	2
					271	Toxic systemic poisoning	1	5730	Skids, pallets	2
					995	Other injury, n.e.c.	1	8800	Miscellaneous	2
								630	Boxes, crates, cartons	1
								900	Chemicals	1
								950	Halogenated compounds	1

Table 4.1 (Cont.)

Occupation				Nature Of Injury Or Illness		Source Of Injury Or Illness		
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	
60	694	Miscellaneous operatives (Cont.)				1960 Lighting equipment	1	
						2245 Knife	1	
						2299 Hand tools, not powered	1	
						2320 Hammer, tamper	1	
						3300 Earth moving machines	1	
						3750 Saws	1	
						3999 Machines	1	
						4200 Mineral items, metallic	1	
						5610 Aircraft	1	
						5800 Working surfaces	1	
						6020 Another person	1	
61	522	Plumbers and pipe fitters	40	13.08	991 Heart conditions	13	4300 Mineral items, nonmetallic	9
					400 Multiple injuries	9	5620 Highway vehicles	3
					283 Asbestosis	6	5899 Working surfaces	3
					110 Asphyxia, strangulation	2	6010 Heart failure	3
					210 Fracture	2	2320 Hammer, tamper	2
					120 Burn (heat)	1	4140 Pipe	2
					170 Cut, laceration, puncture	1	5810 Ground	2
					190 Dislocation	1	8800 Miscellaneous	2
					200 Electric shock	1	400 Bodily motion	1
					271 Toxic systemic poisoning	1	501 Boilers	1
					274 Influenza, pneumonia, etc.	1	601 Barrels, kegs, drums	1
					286 Silicosis	1	799 Buildings and structures	1
					510 Cerebrovascular conditions	1	950 Halogenated compounds	1
						999 Chemicals and compounds	1	
						1599 Electrical apparatus	1	
						2500 Heating equipment	1	
						2610 Cranes, derricks	1	
						3250 Drilling, turning machines	1	
						4115 Beams, bars	1	
						4120 Bullets	1	
						5800 Working surfaces	1	
						5801 Floor	1	
62	623	Gas station attendants	30	13.05	170 Cut, laceration, puncture	14	4120 Bullets	13
					400 Multiple injuries	5	5620 Highway vehicles	6
					210 Fracture	3	1130 Liquid hydrocarbons	1
					120 Burn (heat)	2	1700 Flame, fire, smoke	1
					991 Heart conditions	2	2290 Shovel, spade	1

Table 4.1 (Cont.)

Occupation				Nature Of Injury Or Illness			Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
62	623	Gas station attendants (Cont.)			160	Contusion, crushing	1	4110	Automobile parts (metal)	1
					310	Sprains, strains	1	4135	Nails, spikes, etc.	1
					995	Other injury, n.e.c.	1	4199	Metal items	1
					999	Nonclassifiable	1	5800	Working surfaces	1
								6010	Heart failure	1
								6020	Another person	1
								6210	Tires	1
								9800	Nonclassifiable	1
63	30	Judges	2	12.94	991	Heart conditions	2	6010	Heart failure	2
64	442	Forgemen and hammermen	1	12.71	999	Nonclassifiable	1	9800	Nonclassifiable	1
65	622	Furnace & smelter operators	5	12.57	286	Silicosis	2	705	Doors, gates	2
					110	Asphyxia, strangulation	1	2290	Shovel, spade	1
					210	Fracture	1	4300	Mineral items, nonmetallic	1
					991	Heart conditions	1	4600	Particles (unidentified)	1
66	520	Plasterers	2	11.85	210	Fracture	1	530	Pressure lines	1
					991	Heart conditions	1	5810	Ground	1
67	213	Construction inspectors	2	11.82	400	Multiple injuries	2	5620	Highway vehicles	2
68	441	Foremen	137	11.72	400	Multiple injuries	34	5620	Highway vehicles	27
					991	Heart conditions	25	6010	Heart failure	10
					210	Fracture	22	4300	Mineral items, nonmetallic	8
					200	Electric shock	9	5810	Ground	8
					120	Burn (heat)	6	1515	Conductors	6
					160	Contusion, crushing	6	9800	Nonclassifiable	6
					170	Cut, laceration, puncture	5	2910	Water	5
					999	Nonclassifiable	5	999	Chemicals and compounds	4
					110	Asphyxia, strangulation	4	3300	Earth moving machines	4
					283	Asbestosis	4	755	Walls, fences	3
					286	Silicosis	3	4120	Bullets	3
					551	Malignant tumor	3	5631	Handtrucks, dollies, etc.	3
					140	Concussion	2	8800	Miscellaneous	3
					271	Toxic systemic poisoning	2	250	Insects	2
					274	Influenza, pneumonia, etc.	2	705	Doors, gates	2
					280	Pneumoconiosis	2	1120	Crude, fuel oil	2
					190	Dislocation	1	1700	Flame, fire, smoke	2
					287	Other pneumoconioses	1	3200	Crushing machines	2
					510	Cerebrovascular conditions	1	3999	Machines	2
								4199	Metal items	2

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
68	441	Foremen (Cont.)				5200 Silica	2
						5610 Aircraft	2
						5635 Forklifts, stackers, etc.	2
						5800 Working surfaces	2
						5801 Floor	2
						6020 Another person	2
						630 Boxes, crates, cartons	1
						660 Bundles, bales	1
						699 Containers	1
						801 Brick	1
						1199 Coal & petroleum products	1
						1501 Motors	1
						1510 Transformers, converters	1
						1520 Switches, circuit breakers	1
						2200 Hand tools, not powered	1
						2290 Shovel, spade	1
						2299 Hand tools, not powered	1
						2610 Cranes, derricks	1
						2699 Hoisting apparatus	1
						2899 Ladders	1
						4115 Beams, bars	1
						4140 Pipe	1
						4600 Particles (unidentified)	1
						5710 Logs	1
						5720 Lumber	1
						5820 Roofs	1
						5899 Working surfaces	1
69	416	Carpenter apprentices	1	11.70	400	Multiple injuries	1
70	822	Farm laborers, wage workers	73	11.53	400	Multiple injuries	28
					110	Asphyxia, strangulation	6
					160	Contusion, crushing	6
					200	Electric shock	6
					210	Fracture	6
					991	Heart conditions	6
					999	Nonclassifiable	5
					271	Toxic systemic poisoning	4
					995	Other injury, n.e.c.	3
					140	Concussion	2
					5810	Ground	1
					5620	Highway vehicles	14
					3050	Agricultural machines	11
					5638	Powered towing vehicles	7
					5810	Ground	4
					6010	Heart failure	4
					9800	Nonclassifiable	4
					935	Carbon monoxide	3
					3999	Machines	3
					1820	Grains and grain products	2
					2500	Heating equipment	2

Table 4.1 (Cont.)

Occupation				Nature Of Injury Or Illness			Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
70	822	Farm laborers, wage workers (Cont.)			120	Burn (heat)	1	8800	Miscellaneous	2
								201	Animals	1
								705	Doors, gates	1
								740	Scaffolds, staging, etc.	1
								999	Chemicals and compounds	1
								1140	Hydrocarbon gases	1
								1500	Electric apparatus	1
								1515	Conductors	1
								1599	Electrical apparatus	1
								1700	Flame, fire, smoke	1
								2610	Cranes, derricks	1
								2620	Elevators	1
								2910	Water	1
								3300	Earth moving machines	1
								4300	Mineral items, nonmetallic	1
								4700	Plants, trees, vegetation	1
								5801	Floor	1
								5825	Runways, platforms	1
71	483	Loom fixers	1	11.45	200	Electric shock	1	3950	Weaving, spinning machines	1
72	510	Painters, construction	35	11.02	210	Fracture	11	5810	Ground	11
					400	Multiple injuries	7	5801	Floor	4
					991	Heart conditions	5	699	Containers	2
					160	Contusion, crushing	3	965	Glue	2
					999	Nonclassifiable	2	5899	Working surfaces	2
					110	Asphyxia, strangulation	1	670	Tanks, bins, etc.	1
					190	Dislocation	1	708	Windows, window frames	1
					200	Electric shock	1	1199	Coal & petroleum products	1
					271	Toxic systemic poisoning	1	1515	Conductors	1
					286	Silicosis	1	2910	Water	1
					572	Influenza, pneumonia	1	4140	Pipe	1
					990	Occupational disease	1	4300	Mineral items, nonmetallic	1
								5620	Highway vehicles	1
								5631	Handtrucks, dollies, etc.	1
								5638	Powered towing vehicles	1
								5800	Working surfaces	1
								5840	Stairs, steps	1
								6010	Heart failure	1
								8800	Miscellaneous	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
73	962	Guards and watchmen	44	10.86	170	Cut, laceration, puncture	19	4120	Bullets	18	
					400	Multiple injuries	6	5620	Highway vehicles	5	
					110	Asphyxia, strangulation	5	5810	Ground	2	
					991	Heart conditions	5	6010	Heart failure	2	
					210	Fracture	3	6020	Another person	2	
					160	Contusion, crushing	2	8800	Miscellaneous	2	
					999	Nonclassifiable	2	9800	Nonclassifiable	2	
					200	Electric shock	1	699	Containers	1	
					271	Toxic systemic poisoning	1	999	Chemicals and compounds	1	
								1700	Flame, fire, smoke	1	
								1900	Furniture, fixtures	1	
								2299	Hand tools, not powered	1	
								2620	Elevators	1	
								4140	Pipe	1	
								5300	Scrap, debris, waste	1	
								5801	Floor	1	
								5845	Street, road	1	
								6500	Ice, snow	1	
74	231	Sales managers	25	10.75	170	Cut, laceration, puncture	12	4120	Bullets	10	
					991	Heart conditions	6	5620	Highway vehicles	4	
					210	Fracture	4	6020	Another person	2	
					160	Contusion, crushing	1	8800	Miscellaneous	2	
					400	Multiple injuries	1	630	Boxes, crates, cartons	1	
					995	Other injury, n.e.c.	1	660	Bundles, bales	1	
								1900	Furniture, fixtures	1	
								2245	Knife	1	
								5801	Floor	1	
								6010	Heart failure	1	
								9800	Nonclassifiable	1	
75	932	Recreation attendants	12	10.67	110	Asphyxia, strangulation	5	2910	Water	5	
					210	Fracture	2	5620	Highway vehicles	3	
					991	Heart conditions	2	6100	Athletic equipment	2	
					999	Nonclassifiable	2	6010	Heart failure	1	
					400	Multiple injuries	1	6020	Another person	1	
76	154	Industrial engineering technicians	1	10.63	210	Fracture	1	5610	Aircraft	1	
77	452	Inspectors	10	10.59	991	Heart conditions	5	6010	Heart failure	4	
					400	Multiple injuries	3	5620	Highway vehicles	2	
					200	Electric shock	1	699	Containers	1	

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Deaths</i>	
77	452	Inspectors (Cont.)			286	Silicosis	1	1501 Motors	1
								4300 Mineral items, nonmetallic	1
								5200 Silica	1
78	770	Warehousemen	19	10.48	991	Heart conditions	8	630 Boxes, crates, cartons	6
					400	Multiple injuries	4	5620 Highway vehicles	4
					110	Asphyxia, strangulation	2	4140 Pipe	2
					210	Fracture	2	601 Barrels, kegs, drums	1
					120	Burn (heat)	1	1870 Vegetable products	1
					160	Contusion, crushing	1	2400 Heat	1
					240	Effects of heat exposure	1	3001 Agitators, mixers, etc.	1
								3300 Earth moving machines	1
								5810 Ground	1
								6010 Heart failure	1
79	333	Messengers and office boys	7	10.40	999	Nonclassifiable	3	5620 Highway vehicles	4
					170	Cut, laceration, puncture	2	4120 Bullets	2
					400	Multiple injuries	1	8800 Miscellaneous	1
					991	Heart conditions	1		
80	392	Weighers	3	10.34	120	Burn (heat)	1	699 Containers	1
					286	Silicosis	1	1700 Flame, fire, smoke	1
					991	Heart conditions	1	4300 Mineral items, nonmetallic	1
81	453	Jewelers and watchmakers	3	10.21	170	Cut, laceration, puncture	1	1999 Furniture, fixtures	1
					991	Heart conditions	1	4120 Bullets	1
					999	Nonclassifiable	1	5620 Highway vehicles	1
82	430	Electricians	43	9.89	200	Electric shock	10	5801 Floor	6
					991	Heart conditions	9	1515 Conductors	3
					210	Fracture	6	1520 Switches, circuit breakers	3
					400	Multiple injuries	5	6010 Heart failure	3
					160	Contusion, crushing	3	1501 Motors	2
					170	Cut, laceration, puncture	3	5720 Lumber	2
					110	Asphyxia, strangulation	2	665 Reels, rolls	1
					140	Concussion	2	935 Carbon monoxide	1
					120	Burn (heat)	1	999 Chemicals and compounds	1
					310	Sprains, strains	1	1199 Coal & petroleum products	1
					551	Malignant tumor	1	1500 Electric apparatus	1
								1510 Transformers, converters	1
								1700 Flame, fire, smoke	1
								1870 Vegetable products	1

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
82	430	Electricians (Cont.)						2200	Hand tools, not powered	1
								2315	Drill	1
								2355	Saw	1
								2610	Cranes, derricks	1
								2830	Movable ladders	1
								3300	Earth moving machines	1
								3350	Mining machinery	1
								3750	Saws	1
								3999	Machines	1
								4115	Beams, bars	1
								4300	Mineral items, nonmetallic	1
								5620	Highway vehicles	1
								5640	Rail vehicles	1
								5810	Ground	1
								8800	Miscellaneous	1
								9800	Nonclassifiable	1
83	410	Brickmasons and stonemasons	11	9.80	210	Fracture	4	4300	Mineral items, nonmetallic	2
					991	Heart conditions	2	750	Towers, poles, etc.	1
					110	Asphyxia, strangulation	1	755	Walls, fences	1
					286	Silicosis	1	2910	Water	1
					400	Multiple injuries	1	3999	Machines	1
					572	Influenza, pneumonia	1	4600	Particles (unidentified)	1
					999	Nonclassifiable	1	5800	Working surfaces	1
								5801	Floor	1
								5810	Ground	1
								5820	Roofs	1
84	545	Stationary engineers	12	9.56	991	Heart conditions	5	5620	Highway vehicles	2
					210	Fracture	2	6010	Heart failure	2
					999	Nonclassifiable	2	9800	Nonclassifiable	2
					160	Contusion, crushing	1	501	Boilers	1
					276	Gastro-intestinal disease	1	1599	Electrical apparatus	1
					400	Multiple injuries	1	4199	Metal items	1
								5300	Scrap, debris, waste	1
								5631	Handtrucks, dollies, etc.	1
								5801	Floor	1
85	445	Glaziers	3	9.50	271	Toxic systemic poisoning	1	630	Boxes, crates, cartons	1
					286	Silicosis	1	935	Carbon monoxide	1
					400	Multiple injuries	1	5200	Silica	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
86	334	Meter readers, utilities	3	9.43	110	Asphyxia, strangulation	1	8800	Miscellaneous	2
					210	Fracture	1	3250	Drilling, turning machines	1
					400	Multiple injuries	1			
87	641	Mixing operatives	5	9.20	999	Nonclassifiable	2	900	Chemicals	1
					274	influenza, pneumonia, etc.	1	1350	Powered conveyors	1
					286	Silicosis	1	4300	Mineral items, nonmetallic	1
					289	Pneumoconiosis with TB	1	4600	Particles (unidentified)	1
								9800	Nonclassifiable	1
88	140	College teachers, n.e.c.	4	9.12	210	Fracture	1	5620	Highway vehicles	2
					400	Multiple injuries	1	5610	Aircraft	1
					991	Heart conditions	1	6010	Heart failure	1
					999	Nonclassifiable	1			
89	443	Furniture and wood finishers	2	9.00	286	Silicosis	1	1900	Furniture, fixtures	1
					991	Heart conditions	1	4300	Mineral items, nonmetallic	1
90	753	Freight and material handlers	44	8.91	210	Fracture	12	630	Boxes, crates, cartous	6
					991	Heart conditions	10	6010	Heart failure	5
					400	Multiple injuries	6	5635	Forklifts, stackers, etc.	4
					160	Contusion, crushing	4	4120	Bullets	3
					170	Cut, laceration, puncture	3	5620	Highway vehicles	3
					110	Asphyxia, strangulation	2	1700	Flame, fire, smoke	2
					190	Dislocation	2	1901	Cabinets, bookcases, etc.	2
					120	Burn (heat)	1	3600	Presses (not printing)	2
					140	Concussion	1	5710	Logs	2
					240	Effects of heat exposure	1	9800	Nonclassifiable	2
					286	Silicosis	1	660	Bundles, bales	1
					999	Nonclassifiable	1	901	Acids	1
								1350	Powered conveyors	1
								2400	Heat	1
								3150	Forging, welding machines	1
								4199	Metal items	1
								4800	Plastic items	1
								5631	Handtrucks, dollies, etc.	1
								5638	Powered towing vehicles	1
								5640	Rail vehicles	1
								5801	Floor	1
								5810	Ground	1
								8800	Miscellaneous	1

Table 4.1 (Cont.)

<i>Occupation</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
91	612	Cutting operatives, n.e.c.	15	8.86	991	Heart conditions	8	660	Bundles, bales	2
					286	Silicosis	2	665	Reels, rolls	2
					400	Multiple injuries	2	9800	Nonclassifiable	2
					110	Asphyxia, strangulation	1	1700	Flame, fire, smoke	1
					160	Contusion, crushing	1	2610	Cranes, derricks	1
					190	Dislocation	1	4199	Metal items	1
								4300	Mineral items, nonmetallic	1
								4500	Paper and pulp items	1
								4700	Plants, trees, vegetation	1
								5631	Handtrucks, dollies, etc.	1
								5801	Floor	1
								8800	Miscellaneous	1
92	554	Telephone linemen	5	8.82	200	Electric shock	2	1515	Conductors	2
					210	Fracture	2	1700	Flame, fire, smoke	1
					120	Burn (heat)	1	2641	Air hoist	1
								5810	Ground	1
93	201	Assessors and controllers	2	8.21	170	Cut, laceration, puncture	1	4120	Bullets	1
					991	Heart conditions	1	6010	Heart failure	1
94	651	Grinding machine operative	7	8.14	286	Silicosis	3	4600	Particles (unidentified)	2
					157	Tuberculosis	1	1199	Coal & petroleum products	1
					210	Fracture	1	4300	Mineral items, nonmetallic	1
					280	Pneumoconiosis	1	5200	Silica	1
					400	Multiple injuries	1	5801	Floor	1
								5825	Runways, platforms	1
95	903	Janitors and sextons	75	8.14	991	Heart conditions	28	2290	Shovel, spade	10
					170	Cut, laceration, puncture	11	9800	Nonclassifiable	7
					210	Fracture	11	4120	Bullets	6
					120	Burn (heat)	4	5801	Floor	6
					271	Toxic systemic poisoning	1	1700	Flame, fire, smoke	4
					310	Sprains, strains	3	6010	Heart failure	4
					995	Other injury, n.e.c.	1	5620	Highway vehicles	3
					999	Nonclassifiable	3	5810	Ground	3
					400	Multiple injuries	3	601	Barrels, kegs, drums	2
					200	Electric shock	1	699	Containers	2
					190	Dislocation	1	799	Buildings and structures	2
					160	Contusion, crushing	3	935	Carbon monoxide	2
					140	Concussion	1	1910	Chairs, benches, etc.	2
					510	Cerebrovascular conditions	2	5840	Stairs, steps	2

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Definition</i>	<i>Deaths</i>
95	903	Janitors and sextons (Cont.)			110	Asphyxia, strangulation	2	501 Boilers	1
								630 Boxes, crates, cartons	1
								705 Doors, gates	1
								755 Walls, fences	1
								1140 Hydrocarbon gases	1
								1501 Motors	1
								1599 Electrical apparatus	1
								1970 Tables	1
								1999 Furniture, fixtures	1
								2245 Knife	1
								2285 Screwdriver	1
								2305 Buffer, polisher, waxer	1
								2610 Cranes, derricks	1
								3050 Agricultural machines	1
								3999 Machines	1
								4199 Metal items	1
								5100 Soaps, detergents, cleaners	1
								5720 Lumber	1
								5800 Working surfaces	1
								5825 Runways, platforms	1
96	711	Parking attendants	2	8.05	160	Contusion, crushing	1	2600 Hoisting apparatus	1
					170	Cut, laceration, puncture	1	4120 Bullets	1
97	23	Engineers, n.e.c.	12	8.03	400	Multiple injuries	5	5620 Highway vehicles	5
					991	Heart conditions	2	799 Buildings and structures	1
					110	Asphyxia, strangulation	1	1515 Conductors	1
					150	Infective disease	1	2910 Water	1
					200	Electric shock	1	4600 Particles (unidentified)	1
					210	Fracture	1	5610 Aircraft	1
					999	Nonclassifiable	1	6010 Heart failure	1
								8800 Miscellaneous	1
98	624	Graders and sorters	2	8.01	120	Burn (heat)	1	1700 Flame, fire, smoke	1
					280	Pneumoconiosis	1	9800 Nonclassifiable	1
99	633	Meat cutters, manufacturing	5	7.93	991	Heart conditions	2	201 Animals	1
					110	Asphyxia, strangulation	1	1840 Meats and meat products	1
					310	Sprains, strains	1	5635 Forklifts, stackers, etc.	1
					999	Nonclassifiable	1	5899 Working surfaces	1
								9800 Nonclassifiable	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
100	933	Personal service attendants, n.e.c.	5	7.88	120	Burn (heat)	1	705	Doors, gates	1
					160	Contusion, crushing	1	900	Chemicals	1
					170	Cut, laceration, puncture	1	4120	Bullets	1
					210	Fracture	1	5840	Stairs, steps	1
					991	Heart conditions	1	8800	Miscellaneous	1
101	485	Radio and TV mechanics	6	7.61	991	Heart conditions	4	630	Boxes, crates, cartons	1
					200	Electric shock	1	1200	Cold	1
					999	Nonclassifiable	1	1515	Conductors	1
								1999	Furniture, fixtures	1
								6010	Heart failure	1
								9800	Nonclassifiable	1
102	621	Filets, polishers, sanders	6	7.52	271	Toxic systemic poisoning	2	900	Chemicals	1
					160	Contusion, crushing	1	901	Acids	1
					170	Cut, laceration, puncture	1	3100	Buffers, sanders, grinders	1
					400	Multiple injuries	1	4140	Pipe	1
					991	Heart conditions	1	4199	Metal items	1
								6020	Another person	1
103	703	Bus drivers	18	7.52	991	Heart conditions	6	5620	Highway vehicles	11
					400	Multiple injuries	5	6010	Heart failure	2
					210	Fracture	2	601	Barrels, kegs, drums	1
					999	Nonclassifiable	2	801	Brick	1
					140	Concussion	1	2290	Shovel, spade	1
					170	Cut, laceration, puncture	1	4120	Bullets	1
					250	Hernia, rupture	1	9800	Nonclassifiable	1
104	660	Riveters and fasteners	1	7.40	210	Fracture	1	3999	Machines	1
105	652	Milling machine operatives	5	7.09	210	Fracture	1	3250	Drilling, turning machines	1
					286	Silicosis	1	4115	Beams, bars	1
					400	Multiple injuries	1	5200	Silica	1
					991	Heart conditions	1	5620	Highway vehicles	1
					999	Nonclassifiable	1	5810	Ground	1
106	42	Agricultural scientists	1	7.06	995	Other injury, n.e.c.	1	5620	Highway vehicles	1
107	233	Sales managers, except retail	17	7.02	991	Heart conditions	5	5620	Highway vehicles	3
					170	Cut, laceration, puncture	3	6010	Heart failure	3
					210	Fracture	3	4120	Bullets	2
					400	Multiple injuries	2	9800	Nonclassifiable	2
					110	Asphyxia, strangulation	1	1700	Flame, fire, smoke	1
					510	Cerebrovascular conditions	1	1840	Meats and meat products	1

Table 4.1 (Cont.)

Occupation			Nature Of Injury Or Illness				Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
107	233	Sales managers, except retail (Cont.)			580	Ill-defined conditions	1	2910	Water	1
					999	Nonclassifiable	1	5610	Aircraft	1
								5810	Ground	1
								6020	Another person	1
								6500	Ice, snow	1
108	415	Carpenters	54	6.93	991	Heart conditions	15	5810	Ground	9
					210	Fracture	9	8800	Miscellaneous	6
					400	Multiple injuries	8	5801	Floor	4
					200	Electric shock	5	1515	Conductors	3
					160	Contusion, crushing	4	2610	Cranes, derricks	3
					110	Asphyxia, strangulation	3	5720	Lumber	3
					999	Nonclassifiable	3	3300	Earth moving machines	2
					170	Cut, laceration, puncture	2	4300	Mineral items, nonmetallic	2
					310	Sprains, strains	2	5840	Stairs, steps	2
					100	Amputation or enucleation	1	9800	Nonclassifiable	2
					140	Concussion	1	600	Boxes, containers, packages	1
					995	Other injury, n.e.c.	1	699	Containers	1
								701	Buildings	1
								755	Walls, fences	1
								1599	Electrical apparatus	1
								1930	Desks	1
								2300	Hand tools, powered	1
								2320	Hammer, tamper	1
								2355	Saw	1
								2899	Ladders	1
								2910	Water	1
								3750	Saws	1
								3850	Shears, slitters, slicers	1
								5635	Forklifts, stackers, etc.	1
								5640	Rail vehicles	1
								5820	Roofs	1
								5899	Working surfaces	1
								6010	Heart failure	1
109	764	Vehicle & equipment cleaners	8	6.83	210	Fracture	2	5620	Highway vehicles	3
					999	Nonclassifiable	2	950	Halogenated compounds	1
					100	Amputation or enucleation	1	2620	Elevators	1
					110	Asphyxia, strangulation	1	5631	Handtrucks, dollies, etc.	1
					120	Burn (heat)	1	5640	Rail vehicles	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
109	764	Vehicle & equipment cleaners (Cont.)			400	Multiple injuries	1	5840	Stairs, steps	1
110	421	Cement and concrete finisher	3	6.60	286	Silicosis	1	4600	Particles (unidentified)	1
					400	Multiple injuries	1	5620	Highway vehicles	1
					995	Other injury, n.e.c.	1	5720	Lumber	1
111	690	Miscellaneous machine operators	58	6.55	400	Multiple injuries	11	5620	Highway vehicles	4
					991	Heart conditions	9	6010	Heart failure	4
					999	Nonclassifiable	9	9800	Nonclassifiable	4
					160	Contusion, crushing	6	3999	Machines	3
					286	Silicosis	6	5200	Silica	3
					110	Asphyxia, strangulation	4	5635	Forklifts, stackers, etc.	3
					120	Burn (heat)	3	5749	Wood items	3
					210	Fracture	3	8800	Miscellaneous	3
					200	Electric shock	2	950	Halogenated compounds	2
					170	Cut, laceration, puncture	1	1140	Hydrocarbon gases	2
					250	Hernia, rupture	1	2610	Cranes, derricks	2
					271	Toxic systemic poisoning	1	3000	Machines	2
					274	Influenza, pneumonia, etc.	1	3600	Presses (not printing)	2
					572	Influenza, pneumonia	1	4300	Mineral items, nonmetallic	2
								4600	Particles (unidentified)	2
								601	Barrels, kegs, drums	1
								660	Bundles, bales	1
								755	Walls, fences	1
								901	Acids	1
								1599	Electrical apparatus	1
								1700	Flame, fire, smoke	1
								2500	Heating equipment	1
								2910	Water	1
								2999	Other liquids	1
								3001	Agitators, mixers, etc.	1
								3200	Crushing machines	1
								3300	Earth moving machines	1
								3650	Printing machines	1
								3750	Saws	1
								4120	Bullets	1
								4199	Metal items	1
								5899	Working surfaces	1
112	124	Coaches and P.E. teachers	1	6.51	210	Fracture	1	5620	Highway vehicles	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
113	960	Crossing guards	2	6.45	210	Fracture	1	5620	Highway vehicles	2
114	755	Gardeners and groundskeepers	28	6.41	400	Multiple injuries	1	2290	Shovel, spade	3
					991	Heart conditions	8	4700	Plants, trees, vegetation	3
					210	Fracture	7	1515	Conductors	2
					110	Asphyxia, strangulation	3	1700	Flame, fire, smoke	2
					400	Multiple injuries	3	3050	Agricultural machines	2
					120	Burn (heat)	2	5620	Highway vehicles	2
					999	Nonclassifiable	2	5638	Powered towing vehicles	2
					140	Concussion	1	699	Containers	1
					160	Contusion, crushing	1	1930	Desks	1
					200	Electric shock	1	2000	Glass items	1
								2299	Hand tools, not powered	1
								2910	Water	1
								3300	Earth moving machines	1
								5720	Lumber	1
								5810	Ground	1
								5845	Street, road	1
								5899	Working surfaces	1
								6010	Heart failure	1
								9800	Nonclassifiable	1
115	934	Baggage porters and bellhops	1	6.33	210	Fracture	1	6020	Another person	1
116	706	Fork lift operators	15	6.19	210	Fracture	4	5635	Forklifts, stackers, etc.	7
					991	Heart conditions	4	630	Boxes, crates, cartons	1
					400	Multiple injuries	3	1001	Boots, shoes, etc.	1
					160	Contusion, crushing	1	2290	Shovel, spade	1
					170	Cut, laceration, puncture	1	4199	Metal items	1
					310	Sprains, strains	1	5640	Rail vehicles	1
					995	Other injury, n.e.c.	1	5801	Floor	1
								5810	Ground	1
								6010	Heart failure	1
117	440	Floor layers, except tile	1	6.16	120	Burn (heat)	1	1700	Flame, fire, smoke	1
118	53	Physicists and astronomers	1	5.99	272	Blood disease	1	5000	Radiating substances	1
119	484	Office machine mechanics	3	5.95	510	Cerebrovascular conditions	1	5100	Soaps, detergents, cleaners	1
					551	Malignant tumor	1	5620	Highway vehicles	1
					991	Heart conditions	1	6010	Heart failure	1

Table 4.1 (Cont.)

Occupation				Nature Of Injury Or Illness			Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
120	245	Managers and administrators, n.e.c.	254	5.94	400	Multiple injuries	76	5620	Highway vehicles	60
					991	Heart conditions	60	4120	Bullets	32
					170	Cut, laceration, puncture	43	5610	Aircraft	29
					210	Fracture	31	6010	Heart failure	24
					999	Nonclassifiable	13	630	Boxes, crates, cartons	12
					160	Contusion, crushing	6	9800	Nonclassified	11
					120	Burn (heat)	5	8800	Miscellaneous	7
					110	Asphyxia, strangulation	4	665	Reels, rolls	4
					200	Electric shock	3	4300	Mineral items, nonmetallic	4
					510	Cerebrovascular conditions	3	5801	Floor	4
					140	Concussion	2	5810	Ground	4
					271	Toxic systemic poisoning	2	1700	Flame, fire, smoke	3
					283	Asbestosis	1	2245	Knife	3
					286	Silicosis	1	2610	Cranes, derricks	3
					540	Mental disorders	1	3000	Machines	3
					551	Malignant tumor	1	4700	Plants, trees, vegetation	3
					570	Respiratory conditions	1	5640	Rail vehicles	3
					995	Other injury, n.e.c.	1	699	Containers	2
								705	Doors, gates	2
								935	Carbon monoxide	2
								1515	Conductors	2
								2910	Water	2
								4115	Beams, bars	2
								5631	Hardtacks, dollies, etc.	2
								600	Boxes, containers, packages	1
								601	Barrels, kegs, drums	1
								670	Tanks, bins, etc.	1
								755	Walls, fences	1
								999	Chemicals and compounds	1
								1350	Powered conveyors	1
								1599	Electrical apparatus	1
								1840	Meats and meat products	1
								1910	Chairs, benches, etc.	1
								1930	Desks	1
								1950	Floor coverings	1
								1970	Tables	1
								1999	Furniture, fixtures	1
								2285	Screwdriver	1
								2290	Shovel, spade	1

Table 4.1 (Cont.)

Occupation			Nature Of Injury Or Illness				Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
120	245	Managers and administrators, n.e.c. (Cont.)						3050	Agricultural machines	1
								3300	Earth moving machines	1
								4020	Chains, ropes, cables	1
								4125	Molds	1
								4199	Metal items	1
								4600	Particles (unidentified)	1
								4800	Plastic items	1
								5099	Radiating substances	1
								5635	Forklifts, stackers, etc.	1
								5638	Powered towing vehicles	1
								5660	Water vehicles	1
								5800	Working surfaces	1
								5830	Sidewalks, paths, walkways	1
								5840	Stairs, steps	1
								6020	Another person	1
								6210	Tires	1
121	413	Cabinetmakers	3	5.75	991	Heart conditions	2	999	Chemicals and compounds	1
					271	Toxic systemic poisoning	1	1901	Cabinets, bookcases, etc.	1
								9800	Nonclassifiable	1
122	401	Auto accessories installers	1	5.75	400	Multiple injuries	1	670	Tanks, bins, etc.	1
123	45	Chemists	5	5.71	110	Asphyxia, strangulation	1	601	Barrels, kegs, drums	1
					270	Systemic poisoning	1	900	Chemicals	1
					330	Hepatitis	1	1140	Hydrocarbon gases	1
					400	Multiple injuries	1	2700	Infectious parasites	1
					991	Heart conditions	1	5610	Aircraft	1
124	420	Carpet installers	3	5.51	991	Heart conditions	3	1901	Cabinets, bookcases, etc.	1
								1950	Floor coverings	1
								6010	Heart failure	1
125	315	Vehicle dispatchers	4	5.48	991	Heart conditions	3	630	Boxes, crates, cartons	1
					170	Cut, laceration, puncture	1	660	Bundles, bales	1
								3400	Office machines	1
								4120	Bullets	1
126	902	Cleaners and charwomen	34	5.47	210	Fracture	8	5801	Floor	6
					991	Heart conditions	8	699	Containers	4
					170	Cut, laceration, puncture	3	1350	Powered conveyors	2
					400	Multiple injuries	3	1700	Flame, fire, smoke	2
					120	Burn (heat)	2	2299	Hand tools, not powered	2

Table 4.1 (Cont.)

Occupation			Nature Of Injury Or Illness			Source Of Injury Or Illness				
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
126	902	Cleaners and charwomen (Cont.)			160	Contusion, crushing	2	5800	Working surfaces	2
					274	Influenza, pneumonia, etc.	2	601	Barrels, kegs, drums	1
					100	Amputation or enucleation	1	630	Boxes, crates, cartons	1
					110	Asphyxia, strangulation	1	950	Halogenated compounds	1
					300	Scratches, abrasions	1	1599	Electrical apparatus	1
					510	Cerebrovascular conditions	1	1820	Grains and grain products	1
					572	Influenza, pneumonia	1	1999	Furniture, fixtures	1
					999	Nonclassifiable	1	2700	Infectious parasites	1
								3200	Crushing machines	1
								4020	Chains, ropes, cables	1
								4120	Bullets	1
								4600	Particles (unidentified)	1
								5620	Highway vehicles	1
								5810	Ground	1
								5830	Sidewalks, paths, walkways	1
								6010	Heart failure	1
								9800	Nonclassifiable	1
127	266	Newsboys	4	5.46	999	Nonclassifiable	2	5620	Highway vehicles	4
					210	Fracture	1			
					400	Multiple injuries	1			
128	473	Automobile mechanics	38	5.44	991	Heart conditions	14	5620	Highway vehicles	9
					210	Fracture	7	4110	Automobile parts (metal)	4
					400	Multiple injuries	7	6010	Heart failure	3
					120	Burn (heat)	2	6210	Tires	3
					160	Contusion, crushing	2	599	Pressure vessels	1
					200	Electric shock	2	755	Walls, fences	1
					110	Asphyxia, strangulation	1	935	Carbon monoxide	1
					140	Concussion	1	1200	Cold	1
					240	Effects of heat exposure	1	1700	Flame, fire, smoke	1
					271	Toxic systemic poisoning	1	2400	Heat	1
								2910	Water	1
								4115	Beams, bars	1
								4199	Metal items	1
								5635	Forklifts, stackers, etc.	1
								6020	Another person	1
								3150	Forging, welding machines	2
								5720	Lumber	2
								5810	Ground	2

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
128	473	Automobile mechanics (Cont.)						9800	Nonclassifiable	2
129	161	Surveyors	3	5.43	110	Asphyxia, strangulation	1	5620	Highway vehicles	2
					210	Fracture	1	4700	Plants, trees, vegetation	1
					400	Multiple injuries	1			
130	481	Heavy equipment mechanics	35	5.40	400	Multiple injuries	13	5620	Highway vehicles	3
					210	Fracture	4	5801	Floor	3
					991	Heart conditions	4	1515	Conductors	2
					200	Electric shock	3	2295	Wrench	2
					140	Concussion	2	3300	Earth moving machines	2
					160	Contusion, crushing	2	4199	Metal items	2
					100	Amputation or enucleation	1	8800	Miscellaneous	2
					110	Asphyxia, strangulation	1	670	Tanks, bins, etc.	1
					120	Burn (heat)	1	750	Towers, poles, etc.	1
					286	Silicosis	1	935	Carbon monoxide	1
					310	Sprains, strains	1	1130	Liquid hydrocarbons	1
					572	Influenza, pneumonia	1	1501	Motors	1
					995	Other injury, n.e.c.	1	1520	Switches, circuit breakers	1
								1599	Electrical apparatus	1
								2500	Heating equipment	1
								2699	Hoisting apparatus	1
								3250	Drilling, turning machines	1
								3350	Mining machinery	1
								3999	Machines	1
								5200	Silica	1
								5635	Forklifts, stackers, etc.	1
								5640	Rail vehicles	1
								5810	Ground	1
								6010	Heart failure	1
								6210	Tires	1
								9800	Nonclassifiable	1
131	681	Winding operatives, n.e.c.	2	5.32	120	Burn (heat)	1	1700	Flame, fire, smoke	1
					170	Cut, laceration, puncture	1	8800	Miscellaneous	1
132	480	Farm implement mechanics	2	5.28	210	Fracture	1	5620	Highway vehicles	1
					400	Multiple injuries	1	5845	Street, road	1
133	115	Business teachers	1	5.17	400	Multiple injuries	1	2610	Cranes, derricks	1
134	260	Advertising agents	4	5.14	400	Multiple injuries	2	5620	Highway vehicles	3
					160	Contusion, crushing	1	6010	Heart failure	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
134	260	Advertising agents (Cont.)			991	Heart conditions	1			
135	611	Clothing ironers	4	5.13	991	Heart conditions	3	705	Doors, gates	1
					120	Burn (heat)	1	2399	Hand tools, powered	1
								3600	Presses (not printing)	1
								5620	Highway vehicles	1
136	530	Pressmen and plate printers	6	5.08	991	Heart conditions	3	5730	Skids, pallets	2
					190	Dislocation	1	9800	Nonclassifiable	2
					510	Cerebrovascular conditions	1	2290	Shovel, spade	1
					999	Nonclassifiable	1	5810	Ground	1
137	692	Machine operators, n.e.c.	11	5.05	999	Nonclassifiable	4	9800	Nonclassifiable	3
					170	Cut, laceration, puncture	2	4199	Metal items	2
					286	Silicosis	2	5200	Silica	2
					991	Heart conditions	2	660	Bundles, bales	1
					120	Burn (heat)	1	670	Tanks, bins, etc.	1
								699	Containers	1
								3000	Machines	1
138	680	Welders and flame-cutters	23	5.04	400	Multiple injuries	6	4199	Metal items	3
					120	Burn (heat)	3	601	Barrels, kegs, drums	2
					160	Contusion, crushing	3	3150	Forging, welding machines	2
					210	Fracture	3	4300	Mineral items, nonmetallic	2
					991	Heart conditions	2	4600	Particles (unidentified)	2
					271	Toxic systemic poisoning	1	750	Towers, poles, etc.	1
					274	Influenza, pneumonia, etc.	1	799	Buildings and structures	1
					285	Siderosis	1	900	Chemicals	1
					289	Pneumoconiosis with TB	1	999	Chemicals and compounds	1
					551	Malignant tumor	1	1700	Flame, fire, smoke	1
					999	Nonclassifiable	1	4115	Beams, bars	1
								4140	Pipe	1
								4200	Mineral items, metallic	1
								5099	Radiating substances	1
								5720	Lumber	1
								5801	Floor	1
								9800	Nonclassifiable	1
139	240	Elementary school administrators	10	5.04	991	Heart conditions	8	6010	Heart failure	6
					170	Cut, laceration, puncture	1	3400	Office machines	1
					400	Multiple injuries	1	4120	Bullets	1
								5620	Highway vehicles	1
								9800	Nonclassifiable	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
140	950	Housekeepers, except private home	5	5.03	210	Fracture	1	630	Boxes, crates, cartons	1
					400	Multiple injuries	1	5610	Aircraft	1
					510	Cerebrovascular conditions	1	5620	Highway vehicles	1
					991	Heart conditions	1	5801	Floor	1
					999	Nonclassifiable	1	9800	Nonclassifiable	1
141	25	Foresters	2	4.96	210	Fracture	2	2399	Hand tools, powered	1
								5710	Logs	1
142	230	Restaurant and bar managers	23	4.90	170	Cut, laceration, puncture	10	4120	Bullets	9
					991	Heart conditions	6	699	Containers	3
					210	Fracture	2	630	Boxes, crates, cartons	2
					999	Nonclassifiable	2	5620	Highway vehicles	2
					110	Asphyxia, strangulation	1	1700	Flame, fire, smoke	1
					120	Burn (heat)	1	1970	Tables	1
					160	Contusion, crushing	1	2910	Water	1
								5801	Floor	1
								5840	Stairs, steps	1
								6020	Another person	1
								8800	Miscellaneous	1
143	180	Athletes and kindred workers	4	4.68	210	Fracture	2	755	Walls, fences	1
					110	Asphyxia, strangulation	1	2910	Water	1
					991	Heart conditions	1	5810	Ground	1
								6100	Athletic equipment	1
144	470	Air conditioning mechanics	7	4.86	991	Heart conditions	3	1700	Flame, fire, smoke	2
					120	Burn (heat)	2	6010	Heart failure	2
					200	Electric shock	1	670	Tanks, bins, etc.	1
					400	Multiple injuries	1	1599	Electrical apparatus	1
								5801	Floor	1
145	326	Insurance adjusters	6	4.85	400	Multiple injuries	4	5620	Highway vehicles	4
					991	Heart conditions	2	4500	Paper and pulp items	1
								6010	Heart failure	1
146	615	Dry wall installers	3	4.84	400	Multiple injuries	2	5620	Highway vehicles	1
					991	Heart conditions	1	5810	Ground	1
								6010	Heart failure	1
147	210	Credit men	2	4.72	110	Asphyxia, strangulation	1	2910	Water	1
					400	Multiple injuries	1	5620	Highway vehicles	1
148	740	Animal caretakers, except farm	3	4.60	110	Asphyxia, strangulation	1	2910	Water	1
					210	Fracture	1	5620	Highway vehicles	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Deaths</i>	
148	740	Animal caretakers, except farm (Cont.)			999	Nonclassifiable	1	5801 Floor	1
149	216	Building managers and superintendents	5	4.58	400	Multiple injuries	2	1700 Flame, fire, smoke	1
					120	Burn (heat)	1	3999 Machines	1
					170	Cut, laceration, puncture	1	4120 Bullets	1
					991	Heart conditions	1	5610 Aircraft	1
								5810 Ground	1
150	222	Public administration, n.e.c.	13	4.44	400	Multiple injuries	6	5610 Aircraft	5
					991	Heart conditions	4	5620 Highway vehicles	2
					120	Burn (heat)	1	6010 Heart failure	2
					170	Cut, laceration, puncture	1	2290 Shovel, spade	1
					210	Fracture	1	4120 Bullets	1
								4500 Paper and pulp items	1
								4700 Plants, trees, vegetation	1
151	72	Veterinarians	1	4.34	991	Heart conditions	1	201 Animals	1
152	162	Engineering technicians, n.e.c.	7	4.24	210	Fracture	2	5620 Highway vehicles	4
					400	Multiple injuries	2	1515 Conductors	1
					999	Nonclassifiable	2	5810 Ground	1
					200	Electric shock	1	5899 Working surfaces	1
153	215	Inspectors, except construction	3	4.17	991	Heart conditions	2	699 Containers	1
					570	Respiratory conditions	1	1130 Liquid hydrocarbons	1
								6010 Heart failure	1
154	482	Home appliance installers	4	4.11	210	Fracture	2	1515 Conductors	1
					200	Electric shock	1	5620 Highway vehicles	1
					999	Nonclassifiable	1	5801 Floor	1
								9800 Nonclassifiable	1
155	390	Ticket agents	4	4.08	210	Fracture	2	5620 Highway vehicles	2
					160	Contusion, crushing	1	699 Containers	1
					170	Cut, laceration, puncture	1	4140 Pipe	1
156	560	Tile setters	1	3.98	250	Hernia, rupture	1	630 Boxes, crates, cartons	1
157	631	Meat cutters, except manufacturing	5	3.93	991	Heart conditions	4	1840 Meats and meat products	2
					400	Multiple injuries	1	630 Boxes, crates, cartons	1
								5620 Highway vehicles	1
								6010 Heart failure	1
158	223	Officials of lodges, etc.	3	3.84	170	Cut, laceration, puncture	1	4120 Bullets	1
					210	Fracture	1	5620 Highway vehicles	1
					400	Multiple injuries	1	5840 Stairs, steps	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
159	910	Bartenders	8	3.80	170	Cut, laceration, puncture	5	4120	Bullets	2	
					991	Heart conditions	2	6020	Another person	2	
					210	Fracture	1	8800	Miscellaneous	2	
								5620	Highway vehicles	1	
								9800	Nonclassifiable	1	
160	760	Longshoremen and stevedores	1	3.73	991	Heart conditions	1	5749	Wood items	1	
161	656	Stamping press operatives	3	3.67	160	Contusion, crushing	1	3600	Presses (not printing)	2	
					310	Sprains, strains	1	1970	Tables	1	
					991	Heart conditions	1				
162	211	Funeral directors	1	3.64	999	Nonclassifiable	1	5620	Highway vehicles	1	
163	471	Aircraft mechanics	3	3.60	271	Toxic systemic poisoning	1	900	Chemicals	1	
					400	Multiple injuries	1	999	Chemicals and compounds	1	
					572	Influenza, pneumonia	1	5610	Aircraft	1	
164	644	Painters, manufactured goods	4	3.58	572	Influenza, pneumonia	2	965	Glue	2	
					157	Tuberculosis	1	2700	Infectious parasites	1	
					400	Multiple injuries	1	5801	Floor	1	
165	645	Photographic process workers	2	3.38	310	Sprains, strains	1	665	Reels, rolls	1	
					551	Malignant tumor	1	900	Chemicals	1	
166	13	Industrial engineers	5	3.37	991	Heart conditions	2	6010	Heart failure	2	
					120	Burn (heat)	1	1700	Flame, fire, smoke	1	
					210	Fracture	1	3999	Machines	1	
					400	Multiple injuries	1	5610	Aircraft	1	
167	11	Civil engineers	4	3.28	400	Multiple injuries	3	5620	Highway vehicles	4	
					210	Fracture	1				
168	954	Welfare service aides	2	3.24	140	Concussion	1	5620	Highway vehicles	2	
					400	Multiple injuries	1				
169	145	Teachers, except college, n.e.c.	5	3.24	400	Multiple injuries	2	5620	Highway vehicles	2	
					210	Fracture	1	900	Chemicals	1	
					280	Pneumoconiosis	1	2245	Knife	1	
					995	Other injury, n.e.c.	1	5610	Aircraft	1	
170	64	Pharmacists	3	3.10	991	Heart conditions	2	630	Boxes, crates, cartons	2	
					250	Hernia, rupture	1	5840	Stairs, steps	1	
171	472	Automobile body repairmen	4	3.09	991	Heart conditions	2	965	Glue	1	
					120	Burn (heat)	1	2370	Welding tools	1	
					551	Malignant tumor	1	4110	Automobile parts (metal)	1	
								6010	Heart failure	1	

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
172	150	Agriculture technicians	1	3.05	400	Multiple injuries	1	5620	Highway vehicles	1
173	913	Dishwashers	5	2.97	120	Burn (heat)	1	2910	Water	1
					170	Cut, laceration, puncture	1	4120	Bullets	1
					210	Fracture	1	5801	Floor	1
					991	Heart conditions	1	5899	Working surfaces	1
					999	Nonclassifiable	1	9800	Nonclassifiable	1
174	184	Editors and reporters	4	2.96	991	Heart conditions	2	699	Containers	1
					170	Cut, laceration, puncture	1	4120	Bullets	1
					999	Nonclassifiable	1	6010	Heart failure	1
								9800	Nonclassifiable	1
175	5	Computer specialists, n.e.c.	1	2.92	170	Cut, laceration, puncture	1	4120	Bullets	1
176	634	Meat wrappers, retail trade	1	2.89	572	Influenza, pneumonia	1	999	Chemicals and compounds	1
177	552	Telephone installers	6	2.89	210	Fracture	2	5620	Highway vehicles	2
					991	Heart conditions	2	5749	Wood items	1
					400	Multiple injuries	1	5845	Street, road	1
					999	Nonclassifiable	1	6010	Heart failure	1
								9800	Nonclassifiable	1
178	381	Stock clerk and storekeeper	10	2.87	991	Heart conditions	4	630	Boxes, crates, cartons	4
					170	Cut, laceration, puncture	2	4120	Bullets	3
					160	Contusion, crushing	1	2620	Elevators	1
					210	Fracture	1	4300	Mineral items, nonmetallic	1
					400	Multiple injuries	1	5720	Lumber	1
					990	Occupational disease	1			
179	31	Lawyers	10	2.75	991	Heart conditions	3	4120	Bullets	2
					170	Cut, laceration, puncture	2	5610	Aircraft	2
					210	Fracture	2	5620	Highway vehicles	2
					400	Multiple injuries	2	4500	Paper and pulp items	1
					999	Nonclassifiable	1	5830	Sidewalks, paths, walkways	1
								6010	Heart failure	1
								8800	Miscellaneous	1
180	650	Drill press operatives	1	2.66	280	Pneumoconiosis	1	4300	Mineral items, nonmetallic	1
181	762	Stock handlers	17	2.66	170	Cut, laceration, puncture	6	4120	Bullets	4
					991	Heart conditions	4	630	Boxes, crates, cartons	3
					400	Multiple injuries	3	5635	Forklifts, stackers, etc.	2
					120	Burn (heat)	1	9800	Nonclassifiable	2
					210	Fracture	1	999	Chemicals and compounds	1

Table 4.1 (Cont.)

<i>Occupation</i>		<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>	
181	762 Stock handlers (Cont.)			310 Sprains, strains	1	2245 Knife	1	
				510 Cerebrovascular conditions	1	5620 Highway vehicles	1	
						5631 Handtrucks, dollies, etc.	1	
						5810 Ground	1	
						6200 Rubber products	1	
182	265 Insurance agents	10	2.58	210 Fracture	4	5620 Highway vehicles	3	
				400 Multiple injuries	3	1999 Furniture, fixtures	1	
				991 Heart conditions	2	4120 Bullets	1	
				170 Cut, laceration, puncture	1	5640 Rail vehicles	1	
						5810 Ground	1	
						5845 Street, road	1	
						6010 Heart failure	1	
						9800 Nonclassifiable	1	
183	281 Sales representatives, manufacturing	7	2.57	400 Multiple injuries	3	5610 Aircraft	2	
				110 Asphyxia, strangulation	1	5620 Highway vehicles	2	
				170 Cut, laceration, puncture	1	2910 Water	1	
				210 Fracture	1	4120 Bullets	1	
				999 Nonclassifiable	1	9800 Nonclassifiable	1	
184	44 Biological scientists	1	2.49	110 Asphyxia, strangulation	1	2910 Water	1	
185	10 Chemical engineers	1	2.44	400 Multiple injuries	1	2500 Heating equipment	1	
186	202 Bank officers	11	2.44	400 Multiple injuries	3	5610 Aircraft	3	
				991 Heart conditions	3	1930 Desks	2	
				210 Fracture	2	5620 Highway vehicles	2	
				120 Burn (heat)	1	4120 Bullets	1	
				170 Cut, laceration, puncture	1	5810 Ground	1	
				995 Other injury, n.e.c.	1	6010 Heart failure	1	
						6020 Another person	1	
187	171 Radio operators	1	2.43	991 Heart conditions	1	6010 Heart failure	1	
188	323 Expeditors	4	2.42	160 Contusion, crushing	1	5620 Highway vehicles	2	
				170 Cut, laceration, puncture	1	630 Boxes, crates, cartons	1	
				400 Multiple injuries	1	4125 Molds	1	
				991 Heart conditions	1			
189	225 Purchasing agents, n.e.c.	4	2.38	190 Dislocation	1	5620 Highway vehicles	2	
				210 Fracture	1	4199 Metal items	1	
				400 Multiple injuries	1	9800 Nonclassifiable	1	
				991 Heart conditions	1			

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
190	355	Office machine operators	1	2.37	210	Fracture	1	5801	Floor	1	
191	320	Enumerators and interviewers	1	2.35	991	Heart conditions	1	6010	Heart failure	1	
192	563	Upholsterers	1	2.34	991	Heart conditions	1	6010	Heart failure	1	
193	205	Buyers, wholesale and retail	3	2.30	991	Heart conditions	3	630	Boxes, crates, cartons	1	
								4500	Paper and pulp items	1	
								6010	Heart failure	1	
194	610	Manufacturing inspectors	11	2.18	400	Multiple injuries	3	4300	Mineral items, nonmetallic	2	
					286	Silicosis	2	8800	Miscellaneous	2	
					160	Contusion, crushing	1	1300	Conveyors	1	
					210	Fracture	1	4600	Particles (unidentified)	1	
					283	Asbestosis	1	5200	Silica	1	
					287	Other pneumoconioses	1	5620	Highway vehicles	1	
					289	Pneumoconiosis with TB	1	5635	Forklifts, stackers, etc.	1	
					991	Heart conditions	1	5801	Floor	1	
								6010	Heart failure	1	
195	461	Machinists	8	2.17	170	Cut, laceration, puncture	2	4300	Mineral items, nonmetallic	2	
					991	Heart conditions	2	9800	Nonclassifiable	2	
					200	Electric shock	1	1520	Switches, circuit breakers	1	
					250	Hernia, rupture	1	3000	Machines	1	
					274	Influenza, pneumonia, etc.	1	4199	Metal items	1	
					283	Asbestosis	1	4600	Particles (unidentified)	1	
196	212	Health administrators	3	2.12	170	Cut, laceration, puncture	1	4120	Bullets	1	
					400	Multiple injuries	1	4500	Paper and pulp items	1	
					991	Heart conditions	1	5620	Highway vehicles	1	
197	664	Shoemaking machine operators	1	2.04	991	Heart conditions	1	3900	Stitching, sewing machines	1	
198	643	Packers, except meat and produce	8	1.99	991	Heart conditions	3	660	Bundles, bales	2	
					400	Multiple injuries	2	4300	Mineral items, nonmetallic	2	
					250	Hernia, rupture	1	630	Boxes, crates, cartons	1	
					280	Pneumoconiosis	1	999	Chemicals and compounds	1	
					286	Silicosis	1	4199	Metal items	1	
								6010	Heart failure	1	
199	100	Social workers	5	1.97	999	Nonclassifiable	2	5620	Highway vehicles	2	
					110	Asphyxia, strangulation	1	2910	Water	1	
					140	Concussion	1	5699	Vehicles	1	
					991	Heart conditions	1	6010	Heart failure	1	
200	141	Adult education teachers	1	1.96	991	Heart conditions	1	6010	Heart failure	1	

Table 4.1 (Cont.)

Occupation				Nature Of Injury Or Illness			Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
201	922	Health aides, except nursing	4	1.95	991	Heart conditions	2	630	Boxes, crates, cartons	1
					110	Asphyxia, strangulation	1	2910	Water	1
					999	Nonclassifiable	1	5620	Highway vehicles	1
								6020	Another person	1
202	395	Unspecified clerical workers	6	1.94	991	Heart conditions	2	6010	Heart failure	2
					110	Asphyxia, strangulation	1	1700	Flame, fire, smoke	1
					160	Contusion, crushing	1	1930	Desks	1
					170	Cut, laceration, puncture	1	2245	Knife	1
					210	Fracture	1	5845	Street, road	1
203	152	Draftsmen	4	1.87	200	Electric shock	2	1599	Electrical apparatus	2
					400	Multiple injuries	1	705	Doors, gates	1
					991	Heart conditions	1	5620	Highway vehicles	1
204	371	Secretaries, medical	1	1.77	170	Cut, laceration, puncture	1	4135	Nails, spikes, etc.	1
205	561	Tool and die makers	2	1.70	551	Malignant tumor	1	4300	Mineral items, nonmetallic	1
					991	Heart conditions	1	5620	Highway vehicles	1
206	901	Maids, except private home	2	1.69	110	Asphyxia, strangulation	1	1890	Food products	1
					170	Cut, laceration, puncture	1	4120	Bullets	1
207	2	Architects	1	1.65	250	Hernia, rupture	1	1901	Cabinets, bookcases, etc.	1
208	602	Assemblers	13	1.65	210	Fracture	3	6010	Heart failure	2
					991	Heart conditions	3	400	Bodily motion	1
					160	Contusion, crushing	2	755	Walls, fences	1
					120	Burn (heat)	1	950	Halogenated compounds	1
					271	Toxic systemic poisoning	1	2290	Shovel, spade	1
					310	Sprains, strains	1	2610	Cranes, derricks	1
					400	Multiple injuries	1	3450	Packaging machines	1
					999	Nonclassifiable	1	3999	Machines	1
								5610	Aircraft	1
								5620	Highway vehicles	1
								5810	Ground	1
								9800	Nonclassifiable	1
209	314	Counter clerks, except food	4	1.65	170	Cut, laceration, puncture	2	4120	Bullets	2
					210	Fracture	1	2200	Hand tools, not powered	1
					400	Multiple injuries	1	6020	Another person	1
210	982	Housekeepers, private home	1	1.50	310	Sprains, strains	1	5620	Highway vehicles	1
211	925	Nursing aides and orderlies	11	1.49	991	Heart conditions	3	6020	Another person	5
					140	Concussion	2	6010	Heart failure	2

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>		
211	925	Nursing aides and orderlies (Cont.)			310	Sprains, strains	2		
					190	Dislocation	1		
					510	Cerebrovascular conditions	1		
					995	Other injury, n.e.c.	1		
					999	Nonclassifiable	1		
212	374	Shipping and receiving clerk	5	1.48	991	Heart conditions	5		
213	183	Designers	2	1.47	170	Cut, laceration, puncture	1		
					991	Heart conditions	1		
214	194	Artists and entertainers	1	1.45	170	Cut, laceration, puncture	1		
215	912	Cooks, except private home	13	1.45	991	Heart conditions	6		
					110	Asphyxia, strangulation	3		
					160	Contusion, crushing	1		
					170	Cut, laceration, puncture	1		
					210	Fracture	1		
					400	Multiple injuries	1		
							1920	Counters, benches, etc.	1
							2910	Water	1
							5801	Floor	1
							9800	Nonclassifiable	1
							630	Boxes, crates, cartons	3
							6010	Heart failure	2
							630	Boxes, crates, cartons	1
							2200	Hand tools, not powered	1
							4120	Bullets	1
							699	Containers	3
							6010	Heart failure	2
							630	Boxes, crates, cartons	1
							1140	Hydrocarbon gases	1
							1700	Flame, fire, smoke	1
							2910	Water	1
							4120	Bullets	1
							5620	Highway vehicles	1
							5801	Floor	1
							9800	Nonclassifiable	1
216	935	Barbers	1	1.41	210	Fracture	1		
217	56	Personnel workers	4	1.38	120	Burn (heat)	1		
					170	Cut, laceration, puncture	1		
					400	Multiple injuries	1		
					991	Heart conditions	1		
218	12	Electrical engineers	4	1.33	400	Multiple injuries	3		
					999	Nonclassifiable	1		
219	101	Recreation workers	1	1.28	110	Asphyxia, strangulation	1		
220	220	Office managers, n.e.c.	4	1.27	170	Cut, laceration, puncture	1		
					210	Fracture	1		
					400	Multiple injuries	1		
					540	Mental disorders	1		
221	282	Wholesale sales representatives	8	1.25	400	Multiple injuries	5		
					120	Burn (heat)	1		
					210	Fracture	1		
					999	Nonclassifiable	1		
							5620	Highway vehicles	5
							1700	Flame, fire, smoke	1
							5801	Floor	1
							8800	Miscellaneous	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
222	192	Public relations representatives	1	1.16	999	Nonclassifiable	1	5620	Highway vehicles	1
223	674	Textile operatives, n.e.c.	1	1.16	300	Scratches, abrasions	1	3999	Machines	1
224	235	College administrators	1	1.15	991	Heart conditions	1	6010	Heart failure	1
225	926	Practical nurses	3	1.15	190	Dislocation	1	1700	Flame, fire, smoke	1
					271	Toxic systemic poisoning	1	2700	Infectious parasites	1
					289	Pneumoconiosis with TB	1	6020	Another person	1
226	310	Cashiers	12	1.12	170	Cut, laceration, puncture	5	4120	Bullets	3
					210	Fracture	2	5620	Highway vehicles	2
					991	Heart conditions	2	630	Boxes, crates, cartons	1
					120	Burn (heat)	1	1700	Flame, fire, smoke	1
					400	Multiple injuries	1	2245	Knife	1
					999	Nonclassifiable	1	5801	Floor	1
								6010	Heart failure	1
								6020	Another person	1
								8800	Miscellaneous	1
227	823	Unpaid family farm laborers	2	1.12	210	Fracture	1	3300	Earth moving machines	2
					400	Multiple injuries	1			
228	916	Food service workers, n.e.c.	4	1.11	170	Cut, laceration, puncture	2	9800	Nonclassifiable	2
					190	Dislocation	1	2699	Hoisting apparatus	1
					210	Fracture	1	5801	Floor	1
229	86	Clergymen	2	1.07	991	Heart conditions	1	630	Boxes, crates, cartons	1
					995	Other injury, n.e.c.	1	5620	Highway vehicles	1
230	921	Dental assistants	1	1.06	160	Contusion, crushing	1	1960	Lighting equipment	1
231	915	Waiters	10	1.04	170	Cut, laceration, puncture	3	2910	Water	2
					991	Heart conditions	3	4120	Bullets	2
					110	Asphyxia, strangulation	2	660	Bundles, bales	1
					210	Fracture	2	699	Containers	1
								2245	Knife	1
								5620	Highway vehicles	1
								5801	Floor	1
								9800	Nonclassifiable	1
232	65	Physicians	3	1.00	210	Fracture	1	5620	Highway vehicles	1
					991	Heart conditions	1	6010	Heart failure	1
					999	Nonclassifiable	1	6020	Another person	1
233	271	Stock and bond salesmen	1	0.97	210	Fracture	1	5620	Highway vehicles	1
234	332	Mail handlers	1	0.86	400	Multiple injuries	1	5620	Highway vehicles	1

Table 4.1 (Cont.)

<i>Occupation</i>		<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>
235	174 Vocational counselors	1	0.85	400 Multiple injuries	1	5620 Highway vehicles	1
236	321 Estimators and investigators	3	0.84	210 Fracture	1	5620 Highway vehicles	1
				274 Influenza, pneumonia, etc.	1	6010 Heart failure	1
				510 Cerebrovascular conditions	1	8800 Miscellaneous	1
237	195 Unspecified research workers	1	0.83	271 Toxic systemic poisoning	1	1199 Coal & petroleum products	2
238	301 Bank tellers	3	0.83	170 Cut, laceration, puncture	2	4120 Bullets	1
				110 Asphyxia, strangulation	1	6020 Another person	1
239	422 Compositors and typesetters	1	0.82	991 Heart conditions	1	6010 Heart failure	1
240	55 Operations researchers	1	0.77	400 Multiple injuries	1	5620 Highway vehicles	1
241	190 Painters and sculptors	1	0.74	999 Nonclassifiable	1	5620 Highway vehicles	1
242	4 Computer systems analysts	1	0.71	400 Multiple injuries	1	5620 Highway vehicles	1
243	911 Busboys	1	0.71	170 Cut, laceration, puncture	1	4120 Bullets	1
244	364 Receptionists	3	0.70	170 Cut, laceration, puncture	2	4120 Bullets	2
				991 Heart conditions	1	6010 Heart failure	1
245	942 Child care, except private home	2	0.67	200 Electric shock	1	5749 Wood items	1
				991 Heart conditions	1	8800 Miscellaneous	1
246	914 Food counter workers	2	0.66	170 Cut, laceration, puncture	1	660 Bundles, bales	1
				991 Heart conditions	1	4120 Bullets	1
247	312 Clerical supervisors, n.e.c.	1	0.60	991 Heart conditions	1	6020 Another person	1
248	284 Sales workers, except clerks, retail	2	0.56	400 Multiple injuries	2	5620 Highway vehicles	2
249	153 Electrical engineering technicians	1	0.54	110 Asphyxia, strangulation	1	2910 Water	1
250	1 Accountants	4	0.54	170 Cut, laceration, puncture	1	5620 Highway vehicles	2
				400 Multiple injuries	1	4120 Bullets	1
				995 Other injury, n.e.c.	1	5610 Aircraft	1
				999 Nonclassifiable	1		
251	270 Real estate agents	2	0.52	110 Asphyxia, strangulation	1	935 Carbon monoxide	1
				400 Multiple injuries	1	5620 Highway vehicles	1
252	801 Farmers	5	0.52	400 Multiple injuries	2	3050 Agricultural machines	1
				170 Cut, laceration, puncture	1	4199 Metal items	1
				260 Inflammation of joints	1	5620 Highway vehicles	1
				995 Other injury, n.e.c.	1	5638 Powered towing vehicles	1
						6010 Heart failure	1
253	325 File clerks	1	0.49	991 Heart conditions	1	630 Boxes, crates, cartons	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>
254	305 Bookkeepers	6	0.46	991 Heart conditions	2	630 Boxes, crates, cartons	1
				170 Cut, laceration, puncture	1	999 Chemicals and compounds	1
				210 Fracture	1	4120 Bullets	1
				271 Toxic systemic poisoning	1	5620 Highway vehicles	1
				400 Multiple injuries	1	5801 Floor	1
						6010 Heart failure	1
255	375 Statistical clerks	1	0.39	580 Ill-defined conditions	1	5845 Street, road	1
256	663 Sewers and stitchers	2	0.38	274 Influenza, pneumonia, etc.	1	320 Fur, hair, wool, etc.	1
				991 Heart conditions	1	660 Bundles, bales	1
257	394 Miscellaneous clerical workers	3	0.37	120 Burn (heat)	1	4120 Bullets	1
				170 Cut, laceration, puncture	1	5801 Floor	1
				310 Sprains, strains	1	9800 Nonclassifiable	1
258	283 Sales clerks, retail trade	6	0.37	400 Multiple injuries	4	5620 Highway vehicles	4
				170 Cut, laceration, puncture	1	4120 Bullets	1
				310 Sprains, strains	1	5801 Floor	1
259	984 Servants, private household	1	0.32	400 Multiple injuries	1	5810 Ground	1
260	372 Secretaries, n.e.c.	7	0.29	170 Cut, laceration, puncture	3	4120 Bullets	2
				120 Burn (heat)	1	1700 Flame, fire, smoke	1
				140 Concussion	1	2245 Knife	1
				210 Fracture	1	5620 Highway vehicles	1
				310 Sprains, strains	1	5801 Floor	1
						5810 Ground	1
261	144 Secondary school teachers	2	0.24	991 Heart conditions	2	6010 Heart failure	1
						8800 Miscellaneous	1
262	75 Registered nurses	1	0.11	999 Nonclassifiable	1	9800 Nonclassifiable	1
263	142 Elementary school teachers	1	0.11	400 Multiple injuries	1	5620 Highway vehicles	1
NA	995 OCCUPATION NOT REPORTED	234	NA	999 Nonclassifiable	48	9800 Nonclassifiable	62
				210 Fracture	46	5620 Highway vehicles	39
				400 Multiple injuries	46	5600 Vehicles	18
				991 Heart conditions	29	4120 Bullets	15
				170 Cut, laceration, puncture	22	6010 Heart failure	15
				160 Contusion, crushing	6	4300 Mineral items, nonmetallic	6
				283 Asbestosis	6	5800 Working surfaces	5
				995 Other injury, n.e.c.	6	999 Chemicals and compounds	4
				286 Silicosis	4	1700 Flame, fire, smoke	4
				120 Burn (heat)	3	5700 Wood items	4

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
NA	995	OCUPATION NOT REPORTED (Cont.)			240	Effects of heat exposure	3
					271	Toxic systemic poisoning	3
					310	Sprains, strains	3
					510	Cerebrovascular conditions	2
					110	Asphyxia, strangulation	1
					140	Concussion	1
					200	Electric shock	1
					272	Blood disease	1
					551	Malignant tumor	1
					572	Influenza, pneumonia	1
					990	Occupational disease	1
					5801	Floor	4
					630	Boxes, crates, cartons	3
					3300	Earth moving machines	3
					5610	Aircraft	3
					5638	Powered towing vehicles	3
					5810	Ground	3
					8800	Miscellaneous	3
					100	Abnormal air pressure	2
					699	Containers	2
					900	Chemicals	2
					950	Halogenated compounds	2
					1500	Electric apparatus	2
					2400	Heat	2
					2900	Liquids	2
					4600	Particles (unidentified)	2
					5200	Silica	2
					200	Live animals, birds, etc.	1
					201	Animals	1
					530	Pressure lines	1
					660	Bundles, bales	1
					755	Walls, fences	1
					799	Buildings and structures	1
					1599	Electrical apparatus	1
					1930	Desks	1
					2355	Saw	1
					2800	Ladders	1
					3450	Packaging machines	1
					3999	Machines	1
					4020	Chains, ropes, cables	1
					4110	Automobile parts (metal)	1
					4115	Beams, bars	1
					4140	Pipe	1
					4199	Metal items	1
					5400	Steam	1
					5635	Forklifts, stackers, etc.	1
					5840	Stairs, steps	1
					5899	Working surfaces	1
					6020	Another person	1

Table 4.1 (Cont.)

<i>Occupation</i>				<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>
NA	280 Sales representatives, n.e.c.	95	NA	991 Heart conditions	26	5620 Highway vehicles	37
				400 Multiple injuries	23	4120 Bullets	13
				170 Cut, laceration, puncture	17	630 Boxes, crates, cartons	7
				210 Fracture	14	6010 Heart failure	6
				999 Nonclassifiable	5	5610 Aircraft	4
				120 Burn (heat)	2	8800 Miscellaneous	4
				110 Asphyxia, strangulation	1	1999 Furniture, fixtures	3
				140 Concussion	1	2245 Knife	3
				160 Contusion, crushing	1	699 Containers	2
				190 Dislocation	1	1700 Flame, fire, smoke	2
				280 Pneumoconiosis	1	4140 Pipe	2
				283 Asbestosis	1	9800 Nonclassifiable	2
				510 Cerebrovascular conditions	1	965 Glue	1
				995 Other injury, n.e.c.	1	1599 Electrical apparatus	1
						1910 Chairs, benches, etc.	1
						2620 Elevators	1
						4300 Mineral items, nonmetallic	1
						5800 Working surfaces	1
						5801 Floor	1
						5830 Sidewalks, paths, walkways	1
						5840 Stairs, steps	1
						6210 Tires	1
NA	575 Craftsmen, n.e.c.	5	NA	400 Multiple injuries	3	5620 Highway vehicles	2
				200 Electric shock	1	1515 Conductors	1
				210 Fracture	1	3999 Machines	1
						5801 Floor	1
		4059				4059	4059

n.e.c. = not elsewhere classified

Chapter 5

The Industry List

A single list of 323 industries--283 with denominators and 40 without denominators--is discussed in this chapter. One table, 5.1, is presented. Table 5.1 lists cause of death by *nature* (columns 6, 7, 8) and *source* (columns 9, 10, 11). Causes of death in the *type* category are provided in Appendix D. Again, the *type* category had too many causes and was not always useful. All of the 323 industries recorded at least one death. One list of industries with zero deaths and another list with five or more deaths are provided in Appendices H and I. Including those industries with zero deaths, the study provides information on 370 industries.

The same caveat applies to the industry as to the occupation list. The industry list is not definitive. Many limitations will be noted in Chapter 8. Nevertheless, the list is more comprehensive, that is, it contains more industries and more cause of death information than any other available in the literature.

There are two major differences between the occupation and industry lists. First, to remain consistent with BLS employment (denominator) data, the industry list excluded all local, state, and federal government employees. Second, the industry list used two more years of data than the occupation list: 1985 and 1986.

STRUCTURE OF TABLE 5.1

The structure of the industry table is identical to that for the occupation table with one exception: the industries are defined by 1972 and 1977 S.I.C. codes, not 1970 Census codes.

Just as in the occupation lists, the cause of death information in the industry lists is not always comparable. For example, consider the first few causes of death in logging camps in columns 6, 7, 8 and 9, 10, 11. It is not necessarily true that all 53 deaths due to Plants, trees, and vegetation (columns 9, 10, 11) were

caused by Multiple injuries (columns 6, 7, 8). Some falling trees (columns 9, 10, 11), for example, could have caused a fracture or concussion or other injury (columns 6, 7, 8).

Again, following the structure for Table 4.1, the lists of causes of death within an industry are ranked by numbers of deaths. Leading causes are presented at the top within any industry. Ties are broken by allowing the cause of death category with the lowest ANSI number to precede the next cause of death with a higher ranking number.

Finally, some records on cause of death are probably better than others. No editing was allowed. Readers can make an independent judgment if a conflict arises in the rankings of causes of deaths. A review of the cause of death rankings did not reveal any glaring contradictions, however.

ANALYSIS OF INDUSTRIES

There are a number of parallels between the industry and occupation lists. Logging, Cut Stone, Taxicabs, Iron Ores, Crushed Stone, Street Construction, Trucking, Contractors, Lead Ores, and Heavy Construction are among the top 11 industries. Most of the corresponding occupations are also highly ranked. Lumbermen (rank 3), Stone Cutters (rank 1), Taxi Drivers (rank 22), Miners n.e.c. (rank 17), Construction Laborers (rank 25), Truck Drivers (rank 21), Earth Drillers (rank 12), and Blasters (rank 6) are highly ranked on the occupation list. These corresponding results lend credibility to both the occupation and industry lists.

Logging Camps and Contractors are the top industry on the list. One hundred fifty-seven deaths were recorded, yielding a kill ratio of 186.8 per 100,000 per year. This very high ranking for logging has been noted in other studies.¹ Leading causes of death include "multiple injuries," "fractures," and "concussions," resulting most frequently from trees falling on workers (Appendix D) or workers falling from trees (Appendix D). Accidents involving falls in the logging industry have been widely documented.² Causes of death in Table 5.1 indicate that aircraft crashes resulted in four deaths and bullets resulted in one death.

Cut Stone and Stone Products rank second, recording 12 deaths and a 103 per 100,000 rate. The majority died of silicosis (columns 6, 7, 8). But columns 9, 10, 11 reveal that one death resulted from bullets.

Such a high ranking for the Cut Stone industry has been reported in only two other studies.³ The high rank for Cut Stone in Table 5.1 as well as for stone cutters in Table 4.1 indicates that this line of work requires additional investigation. Stone cutting industries and occupations appear to be very hazardous, yet they are not frequently mentioned in public discussions of dangerous jobs.

The Taxicab industry occupies position three. A rate of 102 per 100,000 was generated from 49 deaths. The dangerous aspects of driving a cab have been noted in other studies.⁴ Taxi drivers most frequently die from homicide, that is, bullets and knives (columns 9, 10, 11) and vehicle crashes (Appendix D).

The Iron Ore Mining industry ranks fourth with 7 deaths yielding a rate of 45 per 100,000 per year. Not surprisingly, silicosis was the leading cause of death. Most mining jobs are widely recognized as hazardous.⁵

The Crushed and Broken Stone Mining industry occupies position five with a 37 per 100,000 rate. The plurality of deaths result from "caught in or under collapsing materials" (Appendix D). This suggests that the stones crush the workers. The next broad category of cause of death would be a vehicle crash or mishaps with an earth moving machine (Appendix D).

The high ranking is not surprising. Earth Moving Operatives were found to have a very high death rate in Texas⁶ and Earth Drillers rank 12th in Table 4.1.

Highway and Street Construction rank sixth. The rate was 36 per 100,000 and was calculated from 93 deaths. Vehicle accidents (columns 9, 10, 11) are a leading cause of death. A high percentage of these accidents apparently afflict pedestrians, not drivers. The ANSI type of death codes are extensive in describing deaths to drivers and passengers of vehicles but brief for describing pedestrian deaths. Given that the leading cause of death in Appendix D is "Struck by, N.E.C.", one can speculate that many of these were pedestrian deaths.

The dangerous nature of construction is well known.⁷ But the fact that highway and street construction is the most dangerous type of construction is probably not well known.

Occupying position seven is Chemical and Fertilizer Mineral Mining with 8 deaths and a rate of 35 per 100,000 per year. According to Appendix D, most of these eight deaths were the result of the decedent being struck by falling objects or motor vehicle accidents or falls. Seven of these 8 accidents caused a fracture. A high rank for Chemical and Fertilizer Minerals is not surprising given that it is a mining industry.

Trucking, in position eight, generated the largest number of deaths--401. The rate was 32.8 per 100,000. The majority of these deaths resulted from vehicle crashes (columns 9, 10, 11). Bullets killed six; a knife killed one, and another person killed one. The bullets, knife, and "another person" (columns 9, 10, 11) categories were likely homicides. Carbon monoxide was responsible for one death (columns 9, 10, 11). Four persons employed in trucking (not necessarily drivers) were electrocuted (columns 6, 7, 8).

Trucking is widely known to researchers as a hazardous industry.⁸ But since the original OSH Act ignored vehicle crashes and because the public continues to underestimate the risk of vehicles, it is likely that this high ranking for trucking will surprise some readers.

Miscellaneous Special Contractors occupy position nine with 130 deaths and a 32 per 100,000 rate. These contractors include paint and wallpaper

stripping contractors, parking lot maintenance, plastic wall installation, sandblasting, swimming pool construction, repairs of T.V. and radio stations, and steeple jacks. Asbestosis and silicosis together felled 17 persons (columns 6, 7, 8). Highway vehicles were responsible for 21 deaths (columns 9, 10, 11). Falls killed 15 (Appendix D). Again, most construction is widely recognized as hazardous.⁹

Lead and Zinc Ore Mining is in position ten. Nine deaths occurred, which generated a rate of 30.5. Four of the deaths were the result of "pneumoconiosis" or "other pneumoconioses" (columns 6, 7, 8). Five deaths resulted from being struck by objects or a fall (Appendix D). No deaths were directly attributed to lead poisoning. This does not mean that lead would not injure lead miners. Most of the effects of lead involve undesirable behavioral changes. Only extremely high levels of lead can cause encephalopathy (degenerative brain disease), which if untreated results in death.¹⁰

Heavy Construction, Excluding Highway, ranks 11th with 175 deaths and a 30.4 rate. This industry constructs bridges and tunnels; water, sewer, pipe, and power lines; dams; harbors; hydroelectric plants; missile facilities; oil refineries; and subways. Causes of deaths were typical for construction. Highway vehicle crashes lead the list in columns 9, 10, 11. A somewhat surprising category ties for the leading cause in Appendix D: "contact with radiation or caustics, by inhalation." This could be a combination of the "asphyxia," "silicosis," "asbestosis," and "influenza" of columns 6, 7, 8. Also somewhat surprising is "electric shock" (columns 6, 7, 8), which was responsible for 18 deaths.

The twelfth most dangerous industry is Sawmills and Planing Mills. Sixty deaths were recorded, which yielded a rate of 28.88. The causes of death are as would be expected for timber work: "being struck by or caught" under "logs and trees" (Appendix D and columns 9, 10, 11). Somewhat unexpected is "highway vehicles" in the leading category in columns 9, 10, 11.

Fats and Oils rank thirteenth (13th). This is a manufacturing industry including cottonseed oil mills, soybean oil mills, animal fat (lard) mills, and shortening mills. Eleven deaths were recorded, generating a rate of 28.1. No cause of death was a clear leader. Vehicle crashes, falls, electrocution, and asphyxia all caused at least one death.

Leather Tanning and Finishing ranks 14th. Five deaths occurred that generated a rate of 27.9. The leading cause of death was asphyxia (columns 6, 7, 8) caused by "contact with radiation or caustics, by inhalation" (Appendix D). The substance inhaled was likely some kind of acid (columns 9, 10, 11).

The fifteenth industry is Sanitary Services. Fifteen deaths were recorded, corresponding to a rate of 27.3. Vehicle crashes caused seven of the deaths (columns 9, 10, 11). Other causes of death involved being struck by objects such as barrels, kegs, and bales (columns 9, 10, 11).

New and Used Car Dealers rank 16th. Thirty-six deaths occurred and generated a rate of 25.8. Vehicle crashes were the leading causes of death (columns 9, 10, 11). This is a very high ranking for an industry that is not

generally regarded as dangerous. The cause of deaths due to vehicles explains this high ranking, however.

Occupying position 17 is Painting, Papering, and Decorating with 39 deaths and a rate of 25.7. As Appendix D indicates, falls were the leading causes of deaths. The inhalation of caustics and toxics generated two asbestosis deaths, one asphyxia death, and one influenza death.

Sand and Gravel is in position 18. Nine deaths occurred and generated a rate of 25.6. Causes of death included vehicle accidents, burns, and inhalation of caustics.

Concrete and Plaster Products rank 19th. Vehicle crashes (columns 9, 10, 11) and contact with electric current were the leading causes of death. Carbon monoxide was responsible for one death (columns 9, 10, 11).

Rounding out the top 20 is Paving and Roofing materials. Seven deaths were recorded, yielding a rate of 24.4 per 100,000. Silicosis and Asbestosis were responsible for two and one death, respectively (columns 6, 7, 8). Overexertion and falls were responsible for another three deaths (Appendix D).

Apart from the top 20, a number of other industries merit comment.

Several industries have causes of death that are understandable and lend credibility to the data in the SDS. The leading cause of death for roofing (rank 21) is falls (Appendix D). The leading causes for Air Transportation Services (rank 22) and Certified Air Transportation (rank 93) are aircraft crashes (columns 9, 10, 11). The leading cause for Electrical Work (rank 56) is electrocution.

A number of industries have leading causes of death that are provocative. Confectionery products (rank 44), Paints and Allied Products (rank 38), Household Furniture (rank 59), Industrial and Inorganic Chemicals (rank 61), Miscellaneous Chemicals (rank 62), Plastics (rank 84), Electrical Repair Shops (rank 86), Books (rank 222), Used Car Dealers (235) have "flame, fire, and smoke" as a leading cause. Real Estate Operators (rank 53), Gasoline Service Stations (rank 60), Real Estate Agents (rank 79), Liquor Stores (108), Shoe Stores (rank 128), Miscellaneous Business Services (rank 143), Cigarettes (rank 147), Grocery Stores (rank 155), Hotels (rank 175), Miscellaneous Shopping Goods Stores (rank 176), Child Care Services (268), Eating and Drinking Places (rank 123), Mutual Savings Banks (rank 195), and Legal Services (rank 280) have "bullets" as the leading cause of death.

Silicosis is one of the leading causes of death in Iron and Steel Foundries (rank 24), Nonmetallic Mineral Products (rank 48), Nonferrous Foundries (rank 85), Basic Steel Products (rank 98), Retail Stores, n.e.c. (rank 117), Special Industry Machinery (rank 124), Pottery and Related Products (rank 139), General Industry Machinery (rank 146), Plumbing and Heating (rank 177), and Miscellaneous Nonmetallic Minerals (no rank or denominator). Asbestosis is one of the leading causes among workers in the Industrial Organic Chemicals industry (rank 102) and Drugs (rank 164). Silicosis and/or asbestosis are

responsible for at least one death in 79 of all 323 industries appearing in Table 5.1.

The leading cause of death in Millwork (rank 52) and Life Insurance (rank 247) is an aircraft crash. The leading cause in Hospitals (rank 248) is "Another person" (columns 9, 10, 11). Decedents may have been "overexerting by lifting objects" (Appendix D), i.e., a patient.

School Buses ranked 63rd, with most deaths being caused by vehicle accidents and two deaths resulting from overexertion with a shovel.

The high rankings for Logging, Taxicabs, Highway Construction, Sawmills, Roofing, Air Transportation, and Electrical Work probably are readily acknowledged by the public. But a number of industries might surprise readers with their high rankings. These include Trucking, Fats and Oils, Leather Tanning, Sanitary Services, New and Used Car Dealers, Miscellaneous Durable Goods, Public Warehousing, Dairy Products, Bakery Products, Confectionery Products, Apparel, Hats, Real Estate Operators, Retail Garden Stores, Groceries, Gasoline Service Stations, School Buses, Beer, Auto Rentals, Newspapers, Retail Bakeries, and Beverages. Again, if these industries surprise readers and perhaps workers contemplating changing jobs, then an important market mechanism for reducing job-related deaths is thwarted. Reasonably accurate knowledge about job hazards among prospective and current employees is necessary if "the market" is to generate compensating wages for dangerous jobs and send an important message to the employer. If the job is hazardous, the employer must pay for the hazard with a higher wage than if the job is safe.

CLOSING REMARKS

Table 5.1 presents the industries ranked by death rates. But this ranking may not be the most useful. Consequently, alphabetical lists are available in the index. A smaller list of industries with five or more deaths is available in Appendix I.

NOTES

1. See Meng, 1991; Leigh, 1987; Harrison et al., 1989; Thaler and Rosen, 1976; Cone et al., 1991; Paulozzi, 1987; Personick, 1992a; and Rosenberg et al., 1993.

2. See Paulozzi, 1987, and Personick, 1992a.

3. See Meng, 1991, and Rosenberg et al., 1993.

4. See Leigh, 1987; Thaler and Rosen, 1976; and Toscano and Windau, 1993.

5. See Meng, 1991; Leigh, 1987; Harrison et al., 1989; Rosenberg et al., 1993; Thaler and Rosen, 1976; and Toscano and Windau, 1993.

6. See Center for Disease Control, 1985.

7. See Center for Disease Control, 1985; Sorock, 1993; and Toscano and Windau, 1993.

8. See Meng, 1991; Center for Disease Control, 1985; Leigh, 1987; Stone, 1993; Bell et al., 1990; Cone et al., 1991; Thaler and Rosen, 1976; and Toscano and Windau, 1993.

9. See Sorock et al., 1993; Personick and Daley, 1989; Goldberg et al., 1989; Cone et al., 1991; and Buskin and Paulozzi, 1987.

10. See Greeley, 1991.

Table 5.1

Male and Female Job Deaths within Industries

Ranked in Descending Order by Rate Of Deaths per 100,000 Workers
With Frequencies of Deaths by Natures and Sources of Injury or Illness

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Number Of Deaths</i>	<i>Rate per 100,000</i>	<i>Code</i>	<i>Definition</i>	<i>Number Of Deaths</i>
1	241	Logging Camps and Contractors	157	186.82	400	Multiple injuries	82
					210	Fracture	43
					999	Nonclassifiable	9
					140	Concussion	5
					160	Contusion, crushing	5
					995	Other injury, n.e.c.	3
					100	Amputation or enucleation	2
					170	Cut, laceration, puncture	2
					200	Electric shock	2
					110	Asphyxia, strangulation	1
					240	Effects of heat exposure	1
					580	Ill-defined conditions	1
					991	Heart conditions	1
						4700	Plants, trees, vegetation
						5710	Logs
						5620	Highway vehicles
						5749	Wood items
						9800	Nonclassifiable
						3300	Earth moving machines
						5638	Powered towing vehicles
						5810	Ground
						5610	Aircraft
						2610	Cranes, derricks
						5635	Forklifts, stackers, etc.
						5700	Wood items
						601	Barrels, kegs, drums
						1515	Conductors
						2355	Saw
						2400	Heat
						2910	Water
						3999	Machines
						4000	Mechanical apparatus
						4020	Chains, ropes, cables
						4120	Bullets
						4150	Metal parts, except auto
						4199	Metal items
						5600	Vehicles
						5800	Working surfaces
						6010	Heart failure
2	328	Cut Stone and Stone Products	12	103.00	286	Silicosis	8
					999	Nonclassifiable	2
					170	Cut, laceration, puncture	1
					274	Influenza, pneumonia, etc.	1
						4300	Mineral items, nonmetallic
						4600	Particles (unidentified)
						3850	Shears, slitters, slicers
						4120	Bullets
						5200	Silica

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
2	328	Cut Stone and Stone Products (Cont.)						8800	Miscellaneous	1
3	412	Taxis	49	102.45	170	Cut, laceration, puncture	25	4120	Bullets	20
					991	Heart conditions	13	5620	Highway vehicles	19
					210	Fracture	5	2245	Knife	4
					400	Multiple injuries	2	6010	Heart failure	2
					995	Other injury, n.e.c.	2	630	Boxes, crates, cartons	1
					160	Contusion, crushing	1	699	Containers	1
					310	Sprains, strains	1	2290	Shovel, spade	1
								5720	Lumber	1
4	101	Iron Ores	7	45.22	286	Silicosis	5	4600	Particles (unidentified)	3
					160	Contusion, crushing	1	4300	Mineral items, nonmetallic	2
					572	Influenza, pneumonia	1	4200	Mineral items, metallic	1
								5899	Working surfaces	1
5	142	Crushed and Broken Stone	14	37.11	400	Multiple injuries	7	4300	Mineral items, nonmetallic	5
					210	Fracture	3	5620	Highway vehicles	4
					160	Contusion, crushing	1	3300	Earth moving machines	2
					991	Heart conditions	1	3700	Rolls	1
					995	Other injury, n.e.c.	1	6010	Heart failure	1
					999	Nonclassifiable	1	9800	Nonclassifiable	1
6	161	Highway, Street Construction	93	36.30	400	Multiple injuries	36	5620	Highway vehicles	31
					210	Fracture	17	3300	Earth moving machines	12
					991	Heart conditions	12	6010	Heart failure	4
					160	Contusion, crushing	7	3200	Crushing machines	3
					999	Nonclassifiable	7	4300	Mineral items, nonmetallic	3
					200	Electric shock	3	4700	Plants, trees, vegetation	3
					110	Asphyxia, strangulation	2	9800	Nonclassifiable	3
					286	Silicosis	2	2290	Shovel, spade	2
					995	Other injury, n.e.c.	2	2320	Hammer, tamper	2
					140	Concussion	1	2910	Water	2
					170	Cut, laceration, puncture	1	5600	Vehicles	2
					240	Effects of heat exposure	1	5635	Forklifts, stackers, etc.	2
					271	Toxic systemic poisoning	1	5710	Logs	2
					310	Sprains, strains	1	5720	Lumber	2
								5810	Ground	2
								250	Insects	1
								820	Drain tile, sewer pipe, etc.	1
								1300	Conveyors	1

Table 5.1 (Cont.)

Industry			Nature Of Injury Or Illness			Source Of Injury Or Illness				
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
6	161	Highway, Street Construction (Cont.)						1350	Powered conveyors	1
								2299	Hand tools, not powered	1
								2400	Heat	1
								2610	Cranes, derricks	1
								3000	Machines	1
								3350	Mining machinery	1
								3999	Machines	1
								4000	Mechanical apparatus	1
								4120	Bullets	1
								4140	Pipe	1
								4199	Metal items	1
								5200	Silica	1
								5640	Rail vehicles	1
								5801	Floor	1
								5845	Street, road	1
7	147	Chemical and Fertilizer Minerals	8	35.20	210	Fracture	7	4700	Plants, trees, vegetation	2
					110	Asphyxia, strangulation	1	5640	Rail vehicles	2
								4300	Mineral items, nonmetallic	1
								5699	Vehicles	1
								5810	Ground	1
								9800	Nonclassifiable	1
8	421	Trucking	401	32.84	400	Multiple injuries	163	5620	Highway vehicles	246
					991	Heart conditions	72	6010	Heart failure	20
					210	Fracture	61	9800	Nonclassifiable	18
					999	Nonclassifiable	32	630	Boxes, crates, cartons	11
					160	Contusion, crushing	16	4120	Bullets	6
					120	Burn (heat)	13	5635	Forklifts, stackers, etc.	6
					170	Cut, laceration, puncture	11	1700	Flame, fire, smoke	5
					110	Asphyxia, strangulation	6	4199	Metal items	5
					995	Other injury, n.e.c.	6	5810	Ground	5
					200	Electric shock	4	5801	Floor	4
					310	Sprains, strains	4	660	Bundles, bales	3
					140	Concussion	3	699	Containers	3
					510	Cerebrovascular conditions	3	1999	Furniture, fixtures	3
					100	Amputation or enucleation	2	3400	Office machines	3
					271	Toxic systemic poisoning	2	5631	Handtrucks, dollies, etc.	3
					190	Dislocation	1	5638	Powered towing vehicles	3
					240	Effects of heat exposure	1	5730	Skids, pallets	3

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
8	421	Trucking (Cont.)			270	Systemic poisoning	1	400	Bodily motion	2
								600	Boxes, containers, packages	2
								665	Reels, rolls	2
								1500	Electric apparatus	2
								1930	Desks	2
								2610	Cranes, derricks	2
								3300	Earth moving machines	2
								5710	Logs	2
								5720	Lumber	2
								5800	Working surfaces	2
								6210	Tires	2
								510	Pressurized containers	1
								530	Pressure lines	1
								601	Barrels, kegs, drums	1
								755	Walls, fences	1
								799	Buildings and structures	1
								935	Carbon monoxide	1
								1120	Crude, fuel oil	1
								1190	Asphalts and road oils	1
								1400	Drugs and medicines	1
								1515	Conductors	1
								1900	Furniture, fixtures	1
								1901	Cabinets, bookcases, etc.	1
								1910	Chairs, benches, etc.	1
								2000	Glass items	1
								2215	Crowbar, pry bar	1
								2230	Hammer, sledge, mallet	1
								2245	Knife	1
								2270	Rope, chain	1
								2400	Heat	1
								2620	Elevators	1
								2910	Water	1
								3050	Agricultural machines	1
								4115	Beams, bars	1
								4500	Paper and pulp items	1
								4700	Plants, trees, vegetation	1
								5600	Vehicles	1
								5840	Stairs, steps	1
								5845	Street, road	1

Table 5.1 (Cont.)

Industry			Deaths		Rate		Nature Of Injury Or Illness		Deaths		Source Of Injury Or Illness		
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths	Code	Definition	Deaths
8	421	Trucking (Cont.)									5899	Working surfaces	1
											6020	Another person	1
											6200	Rubber products	1
											8800	Miscellaneous	1
9	179	Miscellaneous Special Contractors	130	32.45	400	Multiple injuries	33	4300	Mineral items, nonmetallic	21			
					210	Fracture	31	5620	Highway vehicles	21			
					283	Asbestosis	15	5810	Ground	10			
					999	Nonclassifiable	12	5800	Working surfaces	8			
					991	Heart conditions	11	1515	Conductors	6			
					200	Electric shock	9	3300	Earth moving machines	6			
					110	Asphyxia, strangulation	5	5801	Floor	6			
					160	Contusion, crushing	4	2610	Cranes, derricks	5			
					120	Burn (heat)	2	9800	Nonclassifiable	5			
					286	Silicosis	2	4700	Plants, trees, vegetation	4			
					100	Amputation or enucleation	1	755	Walls, fences	3			
					170	Cut, laceration, puncture	1	4115	Beams, bars	3			
					240	Effects of heat exposure	1	4199	Metal items	3			
					510	Cerebrovascular conditions	1	701	Buildings	2			
					561	Central nervous system	1	999	Chemicals and compounds	2			
					570	Respiratory conditions	1	5720	Lumber	2			
								6010	Heart failure	2			
								201	Animals	1			
								530	Pressure lines	1			
								699	Containers	1			
								705	Doors, gates	1			
								740	Scaffolds, staging, etc.	1			
								799	Buildings and structures	1			
								1700	Flame, fire, smoke	1			
								2400	Heat	1			
								2620	Elevators	1			
								2910	Water	1			
								3250	Drilling, turning machines	1			
								3999	Machines	1			
								4140	Pipe	1			
								4600	Particles (unidentified)	1			
								5600	Vehicles	1			
								5610	Aircraft	1			
								5640	Rail vehicles	1			
								5820	Roofs	1			

Table 5.1 (Cont.)

Industry					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
9	179	Miscellaneous Special Contractors (Cont.)						5845	Street, road	1
								5899	Working surfaces	1
								8800	Miscellaneous	1
10	103	Lead and Zinc Ores	9	30.51	210	Fracture	3	4300	Mineral items, nonmetallic	2
					280	Pneumoconiosis	3	750	Towers, poles, etc.	1
					160	Contusion, crushing	1	999	Chemicals and compounds	1
					287	Other pneumoconioses	1	2610	Cranes, derricks	1
					400	Multiple injuries	1	5200	Silica	1
								5635	Forklifts, stackers, etc.	1
								5810	Ground	1
								8800	Miscellaneous	1
11	162	Heavy Construction, except Highway	175	30.41	400	Multiple injuries	62	5620	Highway vehicles	27
					210	Fracture	22	4300	Mineral items, nonmetallic	22
					200	Electric shock	18	5810	Ground	15
					110	Asphyxia, strangulation	16	1515	Conductors	12
					991	Heart conditions	13	2910	Water	11
					999	Nonclassifiable	13	3300	Earth moving machines	11
					286	Silicosis	11	9800	Nonclassifiable	9
					160	Contusion, crushing	7	2610	Cranes, derricks	8
					170	Cut, laceration, puncture	2	5801	Floor	6
					283	Asbestosis	2	4140	Pipe	5
					510	Cerebrovascular conditions	2	4600	Particles (unidentified)	5
					100	Amputation or enucleation	1	1700	Flame, fire, smoke	4
					120	Burn (heat)	1	6010	Heart failure	4
					140	Concussion	1	4115	Beams, bars	3
					190	Dislocation	1	5720	Lumber	3
					310	Sprains, strains	1	5899	Working surfaces	3
					572	Influenza, pneumonia	1	755	Walls, fences	2
					995	Other injury, n.e.c.	1	1140	Hydrocarbon gases	2
								1599	Electrical apparatus	2
								5640	Rail vehicles	2
								8800	Miscellaneous	2
								400	Bodily motion	1
								699	Containers	1
								710	Bridges	1
								740	Scaffolds, staging, etc.	1
								750	Towers, poles, etc.	1
								820	Drain tile, sewer pipe, etc.	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
11	162	Heavy Construction, except Highway (Cont.)								
								1510	Transformers, converters	1
								1520	Switches, circuit breakers	1
								2290	Shovel, spade	1
								2300	Hand tools, powered	1
								2620	Elevators	1
								3001	Agitators, mixers, etc.	1
								3200	Crushing machines	1
								3250	Drilling, turning machines	1
								3750	Saws	1
								5610	Aircraft	1
								5638	Powered towing vehicles	1
12	242	Sawmills and Planing Mills	60	28.88	400	Multiple injuries	24	5620	Highway vehicles	10
					210	Fracture	15	9800	Nonclassifiable	10
					160	Contusion, crushing	7	4700	Plants, trees, vegetation	9
					999	Nonclassifiable	5	5710	Logs	6
					991	Heart conditions	4	5635	Forklifts, stackers, etc.	3
					110	Asphyxia, strangulation	2	1350	Powered conveyors	2
					100	Amputation or enucleation	1	3150	Forging, welding machines	2
					210	Fracture	1	3750	Saws	2
					995	Other injury, n.e.c.	1	100	Abnormal Air Pressure	1
								900	Chemicals	1
								999	Chemicals and compounds	1
								1300	Conveyors	1
								2290	Shovel, spade	1
								3200	Crushing machines	1
								3999	Machines	1
								4140	Pipe	1
								5640	Rail vehicles	1
								5700	Wood items	1
								5730	Skids, pallets	1
								5749	Wood items	1
								5801	Floor	1
								6010	Heart failure	1
								6210	Tires	1
								8800	Miscellaneous	1
13	207	Fats and Oils	11	28.07	991	Heart conditions	4	5620	Highway vehicles	2
					400	Multiple injuries	2	8800	Miscellaneous	2
					100	Amputation or enucleation	1	601	Barrels, kegs, drums	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
13	207	Fats and Oils (Cont.)			110	Asphyxia, strangulation	1	699	Containers	1
					200	Electric shock	1	1501	Motors	1
					210	Fracture	1	4199	Metal items	1
					999	Nonclassifiable	1	5635	Forklifts, stackers, etc.	1
								5801	Floor	1
								6010	Heart failure	1
14	311	Leather Tanning and Finishing	5	27.92	110	Asphyxia, strangulation	3	901	Acids	2
					510	Cerebrovascular conditions	1	6010	Heart failure	2
					991	Heart conditions	1	9800	Nonclassifiable	1
15	495	Sanitary Services	15	27.28	400	Multiple injuries	4	5620	Highway vehicles	7
					991	Heart conditions	4	601	Barrels, kegs, drums	2
					110	Asphyxia, strangulation	1	660	Bundles, bales	1
					120	Burn (heat)	1	901	Acids	1
					170	Cut, laceration, puncture	1	3150	Forging, welding machines	1
					200	Electric shock	1	3300	Earth moving machines	1
					210	Fracture	1	4120	Bullets	1
					271	Toxic systemic poisoning	1	5070	Arc-welding equipment	1
					999	Nonclassifiable	1			
16	551	New and Used Car Dealers	36	25.82	991	Heart conditions	13	5620	Highway vehicles	14
					400	Multiple injuries	11	6010	Heart failure	6
					120	Burn (heat)	2	999	Chemicals and compounds	2
					170	Cut, laceration, puncture	2	4120	Bullets	2
					210	Fracture	2	9800	Nonclassifiable	2
					110	Asphyxia, strangulation	1	1900	Furniture, fixtures	1
					160	Concussion, crushing	1	1930	Desks	1
					240	Effects of heat exposure	1	2370	Welding tools	1
					510	Cerebrovascular conditions	1	2400	Heat	1
					570	Respiratory conditions	1	2910	Water	1
					999	Nonclassifiable	1	3300	Earth moving machines	1
								4110	Automobile parts (metal)	1
								5801	Floor	1
								6210	Tires	1
								6500	Ice, snow	1
17	172	Painting, Paper Hanging, Decorating	39	25.71	210	Fracture	14	5810	Ground	10
					400	Multiple injuries	9	5801	Floor	5
					991	Heart conditions	5	5800	Working surfaces	4
					200	Electric shock	3	1515	Conductors	2
					283	Asbestosis	2	4300	Mineral items, nonmetallic	2

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
17	172	Painting, Paper Hanging, Decorating (Cont.)			110	Asphyxia, strangulation	1	5620	Highway vehicles	2
					160	Contusion, crushing	1	5899	Working surfaces	2
					572	Influenza, pneumonia	1	9800	Nonclassifiable	2
					990	Occupational disease	1	660	Bundles, bales	1
					995	Other injury, n.e.c.	1	670	Tanks, bins, etc.	1
					999	Nonclassifiable	1	699	Containers	1
								708	Windows, window frames	1
								965	Glue	1
								999	Chemicals and compounds	1
								1500	Electric apparatus	1
								2910	Water	1
								5820	Roofs	1
								6010	Heart failure	1
18	144	Sand and Gravel	9	25.58	210	Fracture	2	5800	Working surfaces	2
					400	Multiple injuries	2	9800	Nonclassifiable	2
					999	Nonclassifiable	2	1515	Conductors	1
					110	Asphyxia, strangulation	1	3300	Earth moving machines	1
					120	Burn (heat)	1	3350	Mining machinery	1
					991	Heart conditions	1	4300	Mineral items, nonmetallic	1
								5600	Vehicles	1
19	327	Concrete and Plaster Products	50	24.65	400	Multiple injuries	13	5620	Highway vehicles	9
					991	Heart conditions	8	2610	Cranes, derricks	6
					110	Asphyxia, strangulation	6	4300	Mineral items, nonmetallic	6
					200	Electric shock	6	3300	Earth moving machines	4
					210	Fracture	5	5810	Ground	3
					999	Nonclassifiable	4	5631	Handtrucks, dollies, etc.	2
					160	Contusion, crushing	3	6010	Heart failure	2
					120	Burn (heat)	2	8800	Miscellaneous	2
					271	Toxic systemic poisoning	1	600	Boxes, containers, packages	1
					286	Silicosis	1	605	Bags	1
					570	Respiratory conditions	1	670	Tanks, bins, etc.	1
								939	Carbon monoxide	1
								1180	Naphtha solvents	1
								1515	Conductors	1
								1700	Flame, fire, smoke	1
								2650	Jacks	1
								3999	Machines	1
								4110	Automobile parts (metal)	1
								4199	Metal items	1

Table 5.1 (Cont.)

Industry					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
19	327	Concrete and Plaster Products (Cont.)						5500	Textile items	1
								5635	Forklifts, stackers, etc.	1
								5640	Rail vehicles	1
								5800	Working surfaces	1
								9800	Nonclassifiable	1
20	295	Paving and Roofing Materials	7	24.45	286	Silicosis	2	4600	Particles (unidentified)	2
					310	Sprains, strains	2	9800	Nonclassifiable	2
					210	Fracture	1	5810	Ground	1
					283	Asbestosis	1	6210	Tires	1
					999	Nonclassifiable	1	8800	Miscellaneous	1
21	176	Roofing and Sheet Metal Work	43	24.39	210	Fracture	11	5810	Ground	12
					400	Multiple injuries	9	5620	Highway vehicles	6
					991	Heart conditions	5	4300	Mineral items, nonmetallic	3
					160	Contusion, crushing	3	660	Bundles, bales	2
					283	Asbestosis	3	2400	Heat	2
					999	Nonclassifiable	3	5801	Floor	2
					240	Effects of heat exposure	2	5830	Sidewalks, paths, walkways	2
					510	Cerebrovascular conditions	2	605	Bags	1
					110	Asphyxia, strangulation	1	740	Scaffolds, staging, etc.	1
					140	Concussion	1	1140	Hydrocarbon gases	1
					170	Cut, laceration, puncture	1	1515	Conductors	1
					200	Electric shock	1	2200	Hand tools, not powered	1
					310	Sprains, strains	1	2699	Hoisting apparatus	1
								2830	Movable ladders	1
								4140	Pipe	1
								5720	Lumber	1
								5800	Working surfaces	1
								5820	Roofs	1
								5845	Street, road	1
								8800	Miscellaneous	1
								9800	Nonclassifiable	1
22	458	Air Transportation Services	13	23.40	210	Fracture	4	5610	Aircraft	5
					400	Multiple injuries	3	5620	Highway vehicles	3
					120	Burn (heat)	1	660	Bundles, bales	1
					160	Contusion, crushing	1	699	Containers	1
					190	Dislocation	1	705	Doors, gates	1
					572	Influenza, pneumonia	1	999	Chemicals and compounds	1
					991	Heart conditions	1	6210	Tires	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
22	458	Air Transportation Services (Cont.)			999	Nonclassifiable	1			
23	334	Secondary Nonferrous Metals	5	23.28	120	Burn (heat)	1	660	Bundles, bales	1
					160	Contusion, crushing	1	705	Doors, gates	1
					210	Fracture	1	1700	Flame, fire, smoke	1
					280	Pneumoconiosis	1	4165	Metal chips	1
					510	Cerebrovascular conditions	1	9800	Nonclassifiable	1
24	332	Iron and Steel Foundries	41	23.11	286	Silicosis	14	5200	Silica	6
					400	Multiple injuries	6	9800	Nonclassifiable	5
					999	Nonclassifiable	5	4300	Mineral items, nonmetallic	4
					120	Burn (heat)	4	4130	Molten metal	3
					160	Contusion, crushing	2	999	Chemicals and compounds	2
					210	Fracture	2	2610	Cranes, derricks	2
					190	Dislocation	1	4199	Metal items	2
					200	Electric shock	1	4600	Particles (unidentified)	2
					240	Effects of heat exposure	1	5635	Forklifts, stackers, etc.	2
					280	Pneumoconiosis	1	5801	Floor	2
					289	Pneumoconiosis with TB	1	900	Chemicals	1
					310	Sprains, strains	1	1515	Conductors	1
					990	Occupational disease	1	2400	Heat	1
					991	Heart conditions	1	2500	Heating equipment	1
								2699	Hoisting apparatus	1
								3550	Planers, shapers, molders	1
								4115	Beams, bars	1
								5300	Scrap, debris, waste	1
								5620	Highway vehicles	1
								5899	Working surfaces	1
								6010	Heart failure	1
25	178	Water Well Drilling	4	22.51	200	Electric shock	3	2610	Cranes, derricks	2
					210	Fracture	1	3350	Mining machinery	2
26	509	Miscellaneous Durable Goods	43	21.80	400	Multiple injuries	17	5620	Highway vehicles	10
					210	Fracture	10	2610	Cranes, derricks	3
					170	Cut, laceration, puncture	4	3300	Earth moving machines	3
					991	Heart conditions	4	4120	Bullets	3
					160	Contusion, crushing	3	660	Bundles, bales	2
					200	Electric shock	2	1350	Powered conveyors	2
					110	Asphyxia, strangulation	1	4140	Pipe	2
					120	Burn (heat)	1	5800	Working surfaces	2
					999	Nonclassifiable	1	6010	Heart failure	2

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
26	509	Miscellaneous Durable Goods (Cont.)						6020	Another person	2
								9800	Nonclassifiable	2
								801	Brick	1
								1501	Motors	1
								1515	Conductors	1
								1700	Flame, fire, smoke	1
								2245	Knife	1
								3850	Shears, slitters, slicers	1
								4000	Mechanical apparatus	1
								4800	Plastic items	1
								5640	Rail vehicles	1
								5801	Floor	1
27	493	Combination Utility Services	41	20.52	200	Electric shock	8	5620	Highway vehicles	7
					400	Multiple injuries	8	1515	Conductors	6
					991	Heart conditions	6	4300	Mineral items, nonmetallic	3
					210	Fracture	5	699	Containers	2
					120	Burn (heat)	3	1510	Transformers, converters	2
					283	Asbestosis	3	5800	Working surfaces	2
					170	Cut, laceration, puncture	2	250	Insects	1
					999	Nonclassifiable	2	801	Brick	1
					160	Contusion, crushing	1	985	Metal, n.e.c.	1
					271	Toxic systemic poisoning	1	1500	Electric apparatus	1
					310	Sprains, strains	1	1520	Switches, circuit breakers	1
					551	Malignant tumor	1	1700	Flame, fire, smoke	1
								2230	Hammer, sledge, mallet	1
								2245	Knife	1
								2305	Buffer, polisher, waxer	1
								3300	Earth moving machines	1
								4120	Bullets	1
								4700	Plants, trees, vegetation	1
								5600	Vehicles	1
								5635	Forklifts, stackers, etc.	1
								5640	Rail vehicles	1
								5810	Ground	1
								6500	Ice, snow	1
								8800	Miscellaneous	1
								9800	Nonclassifiable	1

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
28	177	Concrete Work	25	19.15	400	Multiple injuries	10	5620	Highway vehicles	7	
					210	Fracture	4	2299	Hand tools, not powered	2	
					991	Heart conditions	4	4300	Mineral items, nonmetallic	2	
					120	Burn (heat)	2	5720	Lumber	2	
					110	Asphyxia, strangulation	1	5810	Ground	2	
					200	Electric shock	1	8800	Miscellaneous	2	
					310	Sprains, strains	1	9800	Nonclassifiable	2	
					995	Other injury, n.e.c.	1	400	Bodily motion	1	
					999	Nonclassifiable	1	700	Buildings and structures	1	
								701	Buildings	1	
								799	Buildings and structures	1	
								5801	Floor	1	
								6010	Heart failure	1	
29	598	Fuel and Ice Dealers	20	19.00	991	Heart conditions	10	530	Pressure lines	3	
					110	Asphyxia, strangulation	2	6010	Heart failure	3	
					120	Burn (heat)	2	1700	Flame, fire, smoke	2	
					170	Cut, laceration, puncture	2	4120	Bullets	2	
					400	Multiple injuries	2	5620	Highway vehicles	2	
					210	Fracture	1	670	Tanks, bins, etc.	1	
					283	Asbestosis	1	2200	Hand tools, not powered	1	
								2500	Heating equipment	1	
								4300	Mineral items, nonmetallic	1	
								5610	Aircraft	1	
								5810	Ground	1	
								8800	Miscellaneous	1	
								9800	Nonclassifiable	1	
30	171	Plumbing, Heating, Air Conditioning	96	17.03	400	Multiple injuries	23	4300	Mineral items, nonmetallic	20	
					991	Heart conditions	21	5620	Highway vehicles	9	
					110	Asphyxia, strangulation	11	1599	Electrical apparatus	5	
					200	Electric shock	10	4140	Pipe	5	
					283	Asbestosis	9	5899	Working surfaces	5	
					210	Fracture	7	6010	Heart failure	5	
					170	Cut, laceration, puncture	3	5801	Floor	4	
					120	Burn (heat)	2	9800	Nonclassifiable	4	
					160	Contusion, crushing	1	1515	Conductors	3	
					271	Toxic systemic poisoning	1	2610	Cranes, derricks	3	
					274	Influenza, pneumonia, etc.	1	999	Chemicals and compounds	2	
					286	Silicosis	1	2320	Hammer, tamper	2	

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
30	171	Plumbing, Heating, Air Conditioning (Cont.)			510	Cerebrovascular conditions	1	4120	Bullets	2
					551	Malignant tumor	1	5610	Aircraft	2
					570	Respiratory conditions	1	5635	Forklifts, stackers, etc.	2
					572	Influenza, pneumonia	1	5638	Powered towing vehicles	2
					995	Other injury, n.e.c.	1	400	Bodily motion	1
					999	Nonclassifiable	1	501	Boilers	1
								601	Barrels, kegs, drums	1
								670	Tanks, bins, etc.	1
								799	Buildings and structures	1
								915	Aromatic compounds	1
								1700	Flame, fire, smoke	1
								1999	Furniture, fixtures	1
								2290	Shovel, spade	1
								2355	Saw	1
								2500	Heating equipment	1
								2700	Infectious parasites	1
								3250	Drilling, turning machines	1
								3350	Mining machinery	1
								4115	Beams, bars	1
								4199	Metal items	1
								4600	Particles (unidentified)	1
								5800	Working surfaces	1
								5810	Ground	1
								5840	Stairs, steps	1
								8800	Miscellaneous	1
31	503	Lumber and Construction Materials	34	16.98	400	Multiple injuries	11	5620	Highway vehicles	13
					210	Fracture	6	4300	Mineral items, nonmetallic	3
					991	Heart conditions	6	5640	Rail vehicles	2
					120	Burn (heat)	2	6010	Heart failure	2
					160	Contusion, crushing	2	9800	Nonclassifiable	2
					283	Asbestosis	2	699	Containers	1
					140	Concussion	1	755	Walls, fences	1
					190	Dislocation	1	999	Chemicals and compounds	1
					240	Effects of heat exposure	1	1901	Cabinets, bookcases, etc.	1
					286	Silicosis	1	1930	Desks	1
					570	Respiratory conditions	1	2290	Shovel, spade	1
								2500	Heating equipment	1
								2899	Ladders	1
								4600	Particles (unidentified)	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
31	503	Lumber and Construction Materials (Cont.)						4700	Plants, trees, vegetation	1
								5600	Vehicles	1
								5710	Logs	1
32	325	Structural Clay Products	7	16.81	210	Fracture	3	5635	Forklifts, stackers, etc.	3
					400	Multiple injuries	3	801	Brick	1
					160	Contusion, crushing	1	1350	Powered conveyors	1
								3999	Machines	1
								5620	Highway vehicles	1
33	244	Wood Containers	7	16.71	400	Multiple injuries	3	3750	Saws	1
					170	Cut, laceration, puncture	1	3999	Machines	1
					210	Fracture	1	5620	Highway vehicles	1
					991	Heart conditions	1	5635	Forklifts, stackers, etc.	1
					999	Nonclassifiable	1	5638	Powered towing vehicles	1
								5710	Logs	1
								8800	Miscellaneous	1
34	422	Public Warehousing	15	16.71	400	Multiple injuries	6	5620	Highway vehicles	6
					210	Fracture	2	630	Boxes, crates, cartons	3
					991	Heart conditions	2	5635	Forklifts, stackers, etc.	2
					110	Asphyxia, strangulation	1	1350	Powered conveyors	1
					120	Burn (heat)	1	1700	Flame, fire, smoke	1
					160	Contusion, crushing	1	1870	Vegetable products	1
					310	Sprains, strains	1	6010	Heart failure	1
					995	Other injury, n.e.c.	1			
35	154	Nonresidential Construction	86	15.81	400	Multiple injuries	28	5810	Ground	18
					210	Fracture	16	5620	Highway vehicles	7
					991	Heart conditions	15	4300	Mineral items, nonmetallic	5
					200	Electric shock	8	5800	Working surfaces	5
					160	Contusion, crushing	5	9800	Nonclassifiable	5
					110	Asphyxia, strangulation	4	1515	Conductors	4
					999	Nonclassifiable	4	3300	Earth moving machines	4
					140	Concussion	2	5801	Floor	4
					120	Burn (heat)	1	6010	Heart failure	4
					170	Cut, laceration, puncture	1	740	Scaffolds, staging, etc.	2
					280	Pneumoconiosis	1	2610	Cranes, derricks	2
					286	Silicosis	1	4199	Metal items	2
								8800	Miscellaneous	2
								601	Barrels, kegs, drums	1
								999	Chemicals and compounds	1

Table 5.1 (Cont.)

Industry				Nature Of Injury Or Illness		Source Of Injury Or Illness		
Rank	Code Definition	Deaths	Rate	Code	Definition	Deaths	Code Definition	Deaths
35	154 Nonresidential Construction (Cont.)						1510 Transformers, converters	1
							1599 Electrical apparatus	1
							1700 Flame, fire, smoke	1
							2290 Shovel, spade	1
							2300 Hand tools, powered	1
							2355 Saw	1
							2399 Hand tools, powered	1
							2620 Elevators	1
							2699 Hoisting apparatus	1
							2899 Ladders	1
							2910 Water	1
							4115 Beams, bars	1
							4140 Pipe	1
							4700 Plants, trees, vegetation	1
							4930 Pumps	1
							5635 Forklifts, stackers, etc.	1
							5700 Wood items	1
							5720 Lumber	1
							5820 Roofs	1
							5899 Working surfaces	1
36	262 Paper Mills, except Building Paper	27	15.65	110	Asphyxia, strangulation	7	3999 Machines	4
				400	Multiple injuries	5	660 Bundles, bales	3
				160	Contusion, crushing	3	1700 Flame, fire, smoke	3
				210	Fracture	2	1140 Hydrocarbon gases	2
				510	Cerebrovascular conditions	2	4300 Mineral items, nonmetallic	2
				551	Malignant tumor	2	5610 Aircraft	2
				995	Other injury, n.e.c.	2	5620 Highway vehicles	2
				120	Burn (heat)	1	9800 Nonclassifiable	2
				200	Electric shock	1	950 Halogenated compounds	1
				271	Toxic systemic poisoning	1	1515 Conductors	1
				991	Heart conditions	1	2500 Heating equipment	1
							3100 Buffers, sanders, grinders	1
							3300 Earth moving machines	1
							5630 Industrial vehicles	1
							5810 Ground	1
37	542 Meat, Freezer Provisioners	9	15.63	991	Heart conditions	7	5620 Highway vehicles	3
				210	Fracture	1	400 Bodily motion	1
				400	Multiple injuries	1	630 Boxes, crates, cartons	1

Table 5.1 (Cont.)

Industry					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
37	542	Meat, Freezer Provisioners (Cont.)						660	Bundles, bales	1
								1840	Meats and meat products	1
								5749	Wood items	1
								6010	Heart failure	1
38	285	Paints and Allied Products	10	15.52	120	Burn (heat)	3	1700	Flame, fire, smoke	3
					130	Burn (chemical)	2	5620	Highway vehicles	2
					210	Fracture	1	601	Barrels, kegs, drums	1
					270	Systemic poisoning	1	900	Chemicals	1
					280	Pneumoconiosis	1	987	Paint	1
					400	Multiple injuries	1	992	Solvents, n.e.c.	1
					991	Heart conditions	1	4300	Mineral items, nonmetallic	1
39	174	Masonry, Stonework, Plastering	61	15.50	210	Fracture	13	4300	Mineral items, nonmetallic	14
					400	Multiple injuries	13	5620	Highway vehicles	8
					991	Heart conditions	13	5810	Ground	6
					283	Asbestosis	12	755	Walls, fences	4
					999	Nonclassifiable	4	5800	Working surfaces	4
					130	Burn (chemical)	1	6010	Heart failure	4
					160	Contusion, crushing	1	630	Boxes, crates, cartons	2
					200	Electric shock	1	999	Chemicals and compounds	2
					250	Hernia, rupture	1	9800	Nonclassifiable	2
					271	Toxic systemic poisoning	1	530	Pressure lines	1
					572	Influenza, pneumonia	1	670	Tanks, bins, etc.	1
								699	Containers	1
								701	Buildings	1
								750	Towers, poles, etc.	1
								799	Buildings and structures	1
								935	Carbon monoxide	1
								950	Halogenated compounds	1
								1510	Transformers, converters	1
								2800	Ladders	1
								3300	Earth moving machines	1
								5631	Handtrucks, dollies, etc.	1
								5640	Rail vehicles	1
								5801	Floor	1
								6020	Another person	1
40	202	Dairy Products	26	15.27	991	Heart conditions	13	630	Boxes, crates, cartons	6
					400	Multiple injuries	7	5620	Highway vehicles	6
					160	Contusion, crushing	3	9800	Nonclassifiable	3

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>						
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>		
40	202	Dairy Products (Cont.)	210	Fracture	2	755	Walls, fences	2				
			170	Cut, laceration, puncture	1	6010	Heart failure	2				
						1200	Cold	1				
						2295	Wrench	1				
						2620	Elevators	1				
						5638	Powered towing vehicles	1				
						5730	Skids, pallets	1				
						5801	Floor	1				
						8800	Miscellaneous	1				
41	205	Bakery Products	991	Heart conditions	12	5620	Highway vehicles	9				
			400	Multiple injuries	7	9800	Nonclassifiable	4				
			210	Fracture	5	630	Boxes, crates, cartons	3				
			170	Cut, laceration, puncture	3	1820	Grains and grain products	3				
			274	Influenza, pneumonia, etc.	2	4120	Bullets	3				
			160	Contusion, crushing	1	6010	Heart failure	3				
			250	Hernia, rupture	1	699	Containers	2				
			990	Occupational disease	1	5801	Floor	2				
								4160	Metal binders	1		
								5638	Powered towing vehicles	1		
42	494	Water Supply	110	Asphyxia, strangulation	1	5610	Aircraft	1				
			400	Multiple injuries	1	8800	Miscellaneous	1				
			991	Heart conditions	1	9800	Nonclassifiable	1				
								6210	Tires	1		
43	413	Intercity Highway Transport	170	Cut, laceration, puncture	2	5620	Highway vehicles	3				
			400	Multiple injuries	2	2285	Screwdriver	1				
			210	Fracture	1	4120	Bullets	1				
44	206	Confectionery Products	120	Burn (heat)	4	1700	Flame, fire, smoke	5				
			400	Multiple injuries	3	2910	Water	3				
			110	Asphyxia, strangulation	2	5620	Highway vehicles	2				
			991	Heart conditions	2	630	Boxes, crates, cartons	1				
			210	Fracture	1	699	Containers	1				
			271	Toxic systemic poisoning	1	1870	Vegetable products	1				
			995	Other injury, n.e.c.	1	2699	Hoisting apparatus	1				
45	224	Narrow Fabric Mills	120	Burn (heat)	1	1700	Flame, fire, smoke	1				
			400	Multiple injuries	1	3000	Machines	1				
			991	Heart conditions	1	6010	Heart failure	1				

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
46	513	Apparel, Piece Goods, Notions	22	12.57	991	Heart conditions	9	5620	Highway vehicles	5
					210	Fracture	4	630	Boxes, crates, cartons	3
					400	Multiple injuries	2	665	Reels, rolls	2
					510	Cerebrovascular conditions	2	1700	Flame, fire, smoke	2
					999	Nonclassifiable	2	6010	Heart failure	2
					110	Asphyxia, strangulation	1	9800	Nonclassifiable	2
					120	Burn (heat)	1	610	Pots and pans	1
					170	Cut, laceration, puncture	1	660	Bundles, bales	1
								699	Containers	1
								5800	Working surfaces	1
47	204	Grain Mill Products	17	12.55				6020	Another person	1
								8800	Miscellaneous	1
					400	Multiple injuries	5	5620	Highway vehicles	5
					120	Burn (heat)	2	1700	Flame, fire, smoke	2
					100	Amputation or enucleation	1	2620	Elevators	2
					170	Cut, laceration, puncture	1	301	Bones	1
					200	Electric shock	1	699	Containers	1
					210	Fracture	1	2610	Cranes, derricks	1
					274	Influenza, pneumonia, etc.	1	4120	Bullets	1
					286	Silicosis	1	4600	Particles (unidentified)	1
					570	Respiratory conditions	1	5200	Silica	1
					991	Heart conditions	1	5610	Aircraft	1
					995	Other injury, n.e.c.	1	6010	Heart failure	1
					999	Nonclassifiable	1			
48	329	Nonmetallic Mineral Products	16	12.46	286	Silicosis	4	999	Chemicals and compounds	3
					120	Burn (heat)	1	601	Barrels, kegs, drums	1
					130	Burn (chemical)	1	935	Carbon monoxide	1
					157	Tuberculosis	1	1199	Coal and petroleum products	1
					160	Contusion, crushing	1	1599	Electrical apparatus	1
					200	Electric shock	1	1970	Tables	1
					210	Fracture	1	2500	Heating equipment	1
					250	Hernia, rupture	1	4125	Molds	1
					271	Toxic systemic poisoning	1	4300	Mineral items, nonmetallic	1
					283	Asbestosis	1	4600	Particles (unidentified)	1
					310	Sprains, strains	1	5200	Silica	1
					400	Multiple injuries	1	5620	Highway vehicles	1
					999	Nonclassifiable	1	5640	Rail vehicles	1
								9800	Nonclassifiable	1

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
49	333	Primary Nonferrous Metals	7	12.13	210	Fracture	2	9800	Nonclassifiable	2	
					400	Multiple injuries	2	1350	Powered conveyors	1	
					200	Electric shock	1	1520	Switches, circuit breakers	1	
					990	Occupational disease	1	2900	Liquids	1	
					995	Other injury, n.e.c.:	1	4100	Metal items	1	
								5801	Floor	1	
50	235	Hats, Caps, and Millinery	2	11.95	400	Multiple injuries	1	5500	Textile items	1	
					991	Heart conditions	1	5620	Highway vehicles	1	
51	245	Wood Buildings, Mobile Homes	8	11.11	400	Multiple injuries	5	5620	Highway vehicles	5	
					210	Fracture	2	1515	Conductors	1	
					200	Electric shock	1	5631	Handtrucks, dollies, etc.	1	
								9800	Nonclassifiable	1	
52	243	Millwork, Plywood, etc.	24	11.05	400	Multiple injuries	8	5610	Aircraft	3	
					210	Fracture	5	1901	Cabinets, bookcases, etc.	2	
					991	Heart conditions	2	5620	Highway vehicles	2	
					160	Contusion, crushing	1	5720	Lumber	2	
					200	Electric shock	1	5749	Wood items	2	
					250	Hernia, rupture	1	705	Doors, gates	1	
					271	Toxic systemic poisoning	1	999	Chemicals and compounds	1	
					283	Asbestosis	1	1350	Powered conveyors	1	
					310	Sprains, strains	1	2625	Hoists	1	
					580	Ill-defined conditions	1	3600	Presses (not printing)	1	
					995	Other injury, n.e.c.	1	4600	Particles (unidentified)	1	
					999	Nonclassifiable	1	5631	Handtrucks, dollies, etc.	1	
								5635	Forklifts, stackers, etc.	1	
								5710	Logs	1	
								5801	Floor	1	
								5810	Ground	1	
								5845	Street, road	1	
								8800	Miscellaneous	1	
53	651	Real Estate Operators	51	10.58	991	Heart conditions	24	4120	Bullets	5	
					170	Cut, laceration, puncture	10	6010	Heart failure	5	
					120	Burn (heat)	3	2290	Shovel, spade	4	
					210	Fracture	3	699	Containers	3	
					110	Asphyxia, strangulation	2	2245	Knife	3	
					999	Nonclassifiable	2	9800	Nonclassifiable	3	
					140	Concussion	1	601	Barrels, kegs, drums	2	
					160	Contusion, crushing	1	935	Carbon monoxide	2	

Table 5.1 (Cont.)

Industry			Nature Of Injury Or Illness			Source Of Injury Or Illness				
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
53	651	Real Estate Operators (Cont.)			200	Electric shock	1	1700	Flame, fire, smoke	2
					271	Toxic systemic poisoning	1	615	Cans	1
					286	Silicosis	1	630	Boxes, crates, cartons	1
					400	Multiple injuries	1	660	Bundles, bales	1
					572	Influenza, pneumonia	1	705	Doors, gates	1
								799	Buildings and structures	1
								900	Chemicals	1
								987	Paint	1
								1140	Hydrocarbon gases	1
								1910	Chairs, benches, etc.	1
								2000	Glass items	1
								2285	Screwdriver	1
								2299	Hand tools, not powered	1
								2399	Hand tools, powered	1
								3300	Earth moving machines	1
								4199	Metal items	1
								4300	Mineral items, nonmetallic	1
								4600	Particles (unidentified)	1
								5620	Highway vehicles	1
								5801	Floor	1
								5810	Ground	1
								5840	Stairs, steps	1
								8800	Miscellaneous	1
54	517	Oil and Petroleum Products	23	10.57	400	Multiple injuries	7	5620	Highway vehicles	11
					120	Burn (heat)	4	1700	Flame, fire, smoke	2
					991	Heart conditions	3	6010	Heart failure	2
					210	Fracture	2	1130	Liquid hydrocarbons	1
					999	Nonclassifiable	2	1840	Meats and meat products	1
					110	Asphyxia, strangulation	1	2290	Shovel, spade	1
					160	Contusion, crushing	1	3050	Agricultural machines	1
					271	Toxic systemic poisoning	1	4120	Bullets	1
					283	Asbestosis	1	4199	Metal items	1
					995	Other injury, n.e.c.	1	4300	Mineral items, nonmetallic	1
								5600	Vehicles	1
55	411	Local and Suburban Transport	9	10.44	210	Fracture	2	5620	Highway vehicles	5
					400	Multiple injuries	2	4300	Mineral items, nonmetallic	1
					991	Heart conditions	2	5801	Floor	1
					999	Nonclassifiable	2	6010	Heart failure	1

Table 5.1 (Cont.)

Industry					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
55	411	Local and Suburban Transport (Cont.)			283	Asbestosis	1	6210	Tires	1
56	173	Electrical Work	45	10.22	200	Electric shock	12	1515	Conductors	6
					991	Heart conditions	11	5620	Highway vehicles	6
					400	Multiple injuries	7	5801	Floor	4
					210	Fracture	6	5810	Ground	4
					170	Cut, laceration, puncture	3	6010	Heart failure	3
					160	Contusion, crushing	2	9800	Nonclassifiable	3
					110	Asphyxia, strangulation	1	1510	Transformers, converters	2
					140	Concussion	1	8800	Miscellaneous	2
					310	Sprains, strains	1	665	Reels, rolls	1
					551	Malignant tumor	1	1500	Electric apparatus	1
								1501	Motors	1
								1520	Switches, circuit breakers	1
								1599	Electrical apparatus	1
								2260	Pliers, tongs	1
								2315	Drill	1
								2355	Saw	1
								2830	Movable ladders	1
								3999	Machines	1
								4115	Beams, bars	1
								4120	Bullets	1
								4300	Mineral items, nonmetallic	1
								5640	Rail vehicles	1
								5800	Working surfaces	1
57	526	Retail Garden Stores	6	10.20	110	Asphyxia, strangulation	1	6010	Heart failure	2
					160	Contusion, crushing	1	950	Halogenated compounds	1
					210	Fracture	1	3001	Agitators, mixers, etc.	1
					274	Influenza, pneumonia, etc.	1	5620	Highway vehicles	1
					510	Cerebrovascular conditions	1	5630	Industrial vehicles	1
					991	Heart conditions	1			
58	514	Groceries and Related Products	69	10.05	991	Heart conditions	31	5620	Highway vehicles	20
					400	Multiple injuries	12	630	Boxes, crates, cartons	10
					170	Cut, laceration, puncture	7	4120	Bullets	7
					210	Fracture	7	6010	Heart failure	7
					999	Nonclassifiable	3	9800	Nonclassifiable	6
					160	Contusion, crushing	2	5631	Handtrucks, dollies, etc.	4
					310	Sprains, strains	2	5610	Aircraft	2
					510	Cerebrovascular conditions	2	601	Barrels, kegs, drums	1

Table 5.1 (Cont.)

<i>Industry</i>		<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>
58	514 Groceries and Related Products (Cont.)			120 Burn (heat)	1	740 Scaffolds, staging, etc.	1
				200 Electric shock	1	1599 Electrical apparatus	1
				572 Influenza, pneumonia	1	1820 Grains and grain products	1
						1840 Meats and meat products	1
						2315 Drill	1
						2910 Water	1
						4110 Automobile parts (metal)	1
						4500 Paper and pulp items	1
						5635 Forklifts, stackers, etc.	1
						5801 Floor	1
						5845 Street, road	1
						8800 Miscellaneous	1
59	251 Household Furniture	30	9.99	400 Multiple injuries	7	1700 Flame, fire, smoke	5
				120 Burn (heat)	5	5620 Highway vehicles	5
				991 Heart conditions	4	3750 Saws	2
				170 Cut, laceration, puncture	3	4120 Bullets	2
				400 Multiple injuries	3	5801 Floor	2
				160 Contusion, crushing	2	6010 Heart failure	2
				999 Nonclassifiable	2	630 Boxes, crates, cartons	1
				190 Dislocation	1	665 Reels, rolls	1
				200 Electric shock	1	999 Chemicals and compounds	1
				271 Toxic systemic poisoning	1	1599 Electrical apparatus	1
				286 Silicosis	1	2620 Elevators	1
						3000 Machines	1
						3600 Presses (not printing)	1
						3999 Machines	1
						4300 Mineral items, nonmetallic	1
						5610 Aircraft	1
						5635 Forklifts, stackers, etc.	1
						6020 Another person	1
60	554 Gasoline Service Stations	52	9.92	170 Cut, laceration, puncture	23	4120 Bullets	21
				400 Multiple injuries	10	5620 Highway vehicles	13
				991 Heart conditions	5	935 Carbon monoxide	3
				120 Burn (heat)	4	6010 Heart failure	2
				210 Fracture	3	705 Doors, gates	1
				271 Toxic systemic poisoning	3	1130 Liquid hydrocarbons	1
				999 Nonclassifiable	3	1700 Flame, fire, smoke	1
				160 Contusion, crushing	1	2245 Knife	1

Table 5.1 (Cont.)

Industry					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
60	554	Gasoline Service Stations (Cont.)						3100	Buffers, sanders, grinders	1
								4110	Automobile parts (metal)	1
								4135	Nails, spikes, etc.	1
								4199	Metal items	1
								5610	Aircraft	1
								5638	Powered towing vehicles	1
								5800	Working surfaces	1
								6020	Another person	1
								9800	Nonclassifiable	1
61	281	Industrial and Inorganic Chemicals	15	9.79	210	Fracture	4	1700	Flame, fire, smoke	2
					991	Heart conditions	4	5620	Highway vehicles	2
					110	Asphyxia, strangulation	2	5801	Floor	2
					271	Toxic systemic poisoning	1	6010	Heart failure	2
					274	Influenza, pneumonia, etc.	1	601	Barrels, kegs, drums	1
					400	Multiple injuries	1	900	Chemicals	1
					995	Other injury, n.e.c.	1	950	Halogenated compounds	1
					999	Nonclassifiable	1	999	Chemicals and compounds	1
								5635	Forklifts, stackers, etc.	1
								5640	Rail vehicles	1
								9800	Nonclassifiable	1
62	289	Miscellaneous Chemical Products	9	9.74	120	Burn (heat)	5	1700	Flame, fire, smoke	5
					400	Multiple injuries	2	900	Chemicals	1
					274	Influenza, pneumonia, etc.	1	999	Chemicals and compounds	1
					999	Nonclassifiable	1	5620	Highway vehicles	1
								8800	Miscellaneous	1
63	415	School Buses	8	9.71	991	Heart conditions	3	5620	Highway vehicles	5
					400	Multiple injuries	2	2290	Shovel, spade	2
					999	Nonclassifiable	2	6010	Heart failure	1
					210	Fracture	1			
64	518	Beer, Wine, Distilled Liquors	14	9.67	991	Heart conditions	8	630	Boxes, crates, cartons	6
					400	Multiple injuries	5	5620	Highway vehicles	5
					120	Burn (heat)	1	1700	Flame, fire, smoke	1
								5631	Handtrucks, dollies, etc.	1
								6010	Heart failure	1
65	751	Auto Rentals, without Drivers	12	9.58	999	Nonclassifiable	1	5620	Highway vehicles	7
					991	Heart conditions	3	1130	Liquid hydrocarbons	1
					572	Influenza, pneumonia	1	3750	Saws	1

Table 5.1 (Cont.)

Industry					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
65	751	Auto Rentals, without Drivers (Cont.)			400	Multiple injuries	5	4120	Bullets	1
					210	Fracture	1	5720	Lumber	1
					170	Cut, laceration, puncture	1	8800	Miscellaneous	1
66	519	Miscellaneous Nondurable Goods	38	9.45	400	Multiple injuries	8	5620	Highway vehicles	9
					991	Heart conditions	7	630	Boxes, crates, cartons	3
					110	Asphyxia, strangulation	3	6010	Heart failure	3
					170	Cut, laceration, puncture	3	4120	Bullets	2
					200	Electric shock	3	5635	Forklifts, stackers, etc.	2
					210	Fracture	3	8800	Miscellaneous	2
					999	Nonclassifiable	3	250	Insects	1
					271	Toxic systemic poisoning	2	660	Bundles, bales	1
					120	Burn (heat)	1	701	Buildings	1
					140	Concussion	1	999	Chemicals and compounds	1
					160	Contusion, crushing	1	1350	Powered conveyors	1
					286	Silicosis	1	1515	Conductors	1
					990	Occupational disease	1	1700	Flame, fire, smoke	1
					995	Other injury, n.e.c.	1	1999	Furniture, fixtures	1
								2610	Cranes, derricks	1
								2620	Elevators	1
								2830	Movable ladders	1
								3001	Agitators, mixers, etc.	1
								4140	Pipe	1
								4300	Mineral items, nonmetallic	1
								5631	Handtrucks, dollies, etc.	1
								5810	Ground	1
								9800	Nonclassifiable	1
67	271	Newspapers	41	9.43	991	Heart conditions	14	5620	Highway vehicles	19
					400	Multiple injuries	7	660	Bundles, bales	9
					999	Nonclassifiable	6	665	Reels, rolls	2
					210	Fracture	5	6010	Heart failure	2
					170	Cut, laceration, puncture	4	699	Containers	1
					274	Influenza, pneumonia, etc.	2	710	Bridges	1
					110	Asphyxia, strangulation	1	799	Buildings and structures	1
					160	Contusion, crushing	1	999	Chemicals and compounds	1
					190	Distocation	1	2245	Knife	1
								4110	Automobile parts (metal)	1
								4600	Particles (unidentified)	1
								8800	Miscellaneous	1

Table 5.1 (Cont.)

Industry			Nature Of Injury Or Illness			Source Of Injury Or Illness				
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
67	271	Newspapers (Cont.)						9800	Nonclassifiable	1
68	546	Retail Bakeries	13	9.32	991	Heart conditions	6	699	Containers	3
					400	Multiple injuries	2	1820	Grains and grain products	3
					572	Influenza, pneumonia	2	5620	Highway vehicles	2
					170	Cut, laceration, puncture	1	605	Bags	1
					210	Fracture	1	630	Boxes, crates, cartons	1
					999	Nonclassifiable	1	2245	Knife	1
								5840	Stairs, steps	1
								6020	Another person	1
69	319	Leather Goods, n.e.c.	1	9.17	991	Heart conditions	1	630	Boxes, crates, cartons	1
70	237	Fur Goods	2	9.13	274	Influenza, pneumonia, etc.	1	320	Fur, hair, wool, etc.	1
					991	Heart conditions	1	1099	Apparel	1
71	471	Freight Forwarding	5	9.13	991	Heart conditions	3	6010	Heart failure	2
					170	Cut, laceration, puncture	1	630	Boxes, crates, cartons	1
					210	Fracture	1	2245	Knife	1
								5801	Floor	1
72	515	Farm-Product Raw Materials	13	9.08	400	Multiple injuries	7	5620	Highway vehicles	4
					160	Contusion, crushing	2	201	Animals	1
					210	Fracture	2	701	Buildings	1
					110	Asphyxia, strangulation	1	1820	Grains and grain products	1
					995	Other injury, n.e.c.	1	5610	Aircraft	1
								5635	Forklifts, stackers, etc.	1
								5640	Rail vehicles	1
								5810	Ground	1
								5825	Runways, platforms	1
								9800	Nonclassifiable	1
73	208	Beverages	20	8.86	991	Heart conditions	11	6010	Heart failure	3
					400	Multiple injuries	3	630	Boxes, crates, cartons	2
					110	Asphyxia, strangulation	2	5620	Highway vehicles	2
					999	Nonclassifiable	2	5631	Handtrucks, dollies, etc.	2
					210	Fracture	1	9800	Nonclassifiable	2
					286	Silicosis	1	601	Barrels, kegs, drums	1
								670	Tanks, bins, etc.	1
								705	Doors, gates	1
								1300	Conveyors	1
								2270	Rope, chain	1
								2999	Other liquids	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
73	208	Beverages (Cont.)						4300	Mineral items, nonmetallic	1
								5635	Forklifts, stackers, etc.	1
								5749	Wood items	1
74	249	Miscellaneous Wood Products	7	8.86	160	Contusion, crushing	2	3600	Presses (not printing)	2
					110	Asphyxia, strangulation	1	1520	Switches, circuit breakers	1
					200	Electric shock	1	1700	Flame, fire, smoke	1
					240	Effects of heat exposure	1	2400	Heat	1
					400	Multiple injuries	1	5620	Highway vehicles	1
					999	Nonclassifiable	1	5638	Powered towing vehicles	1
75	252	Office Furniture	5	8.84	210	Fracture	2	1350	Powered conveyors	1
					271	Toxic systemic poisoning	1	4600	Particles (unidentified)	1
					400	Multiple injuries	1	5610	Aircraft	1
					570	Respiratory conditions	1	5620	Highway vehicles	1
								8800	Miscellaneous	1
76	175	Carpentering and Flooring	13	8.83	991	Heart conditions	6	5620	Highway vehicles	2
					210	Fracture	3	701	Buildings	1
					120	Burn (heat)	1	755	Walls, fences	1
					140	Concussion	1	1515	Conductors	1
					200	Electric shock	1	1700	Flame, fire, smoke	1
					400	Multiple injuries	1	1950	Floor coverings	1
								1999	Furniture, fixtures	1
								3850	Shears, slitters, slicers	1
								5631	Handtrucks, dollies, etc.	1
								5635	Forklifts, stackers, etc.	1
								6010	Heart failure	1
								9800	Nonclassifiable	1
77	226	Textile Finishing, except Wool	6	8.79	100	Amputation or enucleation	1	665	Reels, rolls	1
					170	Cut, laceration, puncture	1	999	Chemicals and compounds	1
					300	Scratches, abrasions	1	1350	Powered conveyors	1
					400	Multiple injuries	1	3999	Machines	1
					551	Malignant tumor	1	4120	Bullets	1
					991	Heart conditions	1	5801	Floor	1
78	152	Residential Building Construction	52	8.72	400	Multiple injuries	12	5620	Highway vehicles	6
					991	Heart conditions	11	3300	Earth moving machines	4
					210	Fracture	10	5801	Floor	4
					200	Electric shock	5	5810	Ground	4
					160	Contusion, crushing	3	6010	Heart failure	3

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
78	152	Residential Building Construction (Cont.)			999	Nonclassifiable	3	8800	Miscellaneous	3
					120	Burn (heat)	2	1599	Electrical apparatus	2
					170	Cut, laceration, puncture	1	1700	Flame, fire, smoke	2
					190	Dislocation	1	4930	Pumps	2
					240	Effects of heat exposure	1	5840	Stairs, steps	2
					310	Sprains, strains	1	600	Boxes, containers, packages	1
					551	Malignant tumor	1	699	Containers	1
					995	Other injury, n.e.c.	1	755	Walls, fences	1
								801	Brick	1
								1500	Electric apparatus	1
								1515	Conductors	1
								2230	Hammer, sledge, mallet	1
								2320	Hammer, tamper	1
								2400	Heat	1
								2610	Cranes, derricks	1
								2900	Liquids	1
								3750	Saws	1
								4115	Beams, bars	1
								4199	Metal items	1
								5099	Radiating substances	1
								5600	Vehicles	1
								5720	Lumber	1
								5800	Working surfaces	1
								5820	Roofs	1
								9800	Nonclassifiable	1
79	653	Real Estate Agents, Managers	34	8.48	991	Heart conditions	7	4120	Bullets	5
					170	Cut, laceration, puncture	6	1700	Flame, fire, smoke	4
					110	Asphyxia, strangulation	4	5620	Highway vehicles	4
					160	Contusion, crushing	4	6010	Heart failure	4
					400	Multiple injuries	4	5610	Aircraft	2
					120	Burn (heat)	3	501	Boilers	1
					210	Fracture	3	755	Walls, fences	1
					510	Cerebrovascular conditions	2	799	Buildings and structures	1
					140	Concussion	1	935	Carbon monoxide	1
								1599	Electrical apparatus	1
								2000	Glass items	1
								2620	Elevators	1
								2910	Water	1
								4800	Plastic items	1

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
79	653	Real Estate Agents, Managers (Cont.)						5400	Steam	1
								5631	Handtrucks, dollies, etc.	1
								5801	Floor	1
								5840	Stairs, steps	1
								8800	Miscellaneous	1
								9800	Nonclassifiable	1
80	399	Miscellaneous Manufactures	11	8.28	400	Multiple injuries	4	630	Boxes, crates, cartons	2
					991	Heart conditions	2	5620	Highway vehicles	2
					120	Burn (heat)	1	5801	Floor	2
					170	Cut, laceration, puncture	1	9800	Nonclassifiable	2
					210	Fracture	1	2699	Hoisting apparatus	1
					310	Sprains, strains	1	3100	Buffers, sanders, grinders	1
					999	Nonclassifiable	1	5700	Wood items	1
81	229	Miscellaneous Textile Goods	5	8.18	200	Electric shock	1	4600	Particles (unidentified)	2
					210	Fracture	1	1515	Conductors	1
					274	Influenza, pneumonia, etc.	1	5620	Highway vehicles	1
					572	Influenza, pneumonia	1	8800	Miscellaneous	1
					991	Heart conditions	1			
82	201	Meat Products	29	8.07	210	Fracture	9	5620	Highway vehicles	10
					991	Heart conditions	6	6010	Heart failure	3
					120	Burn (heat)	3	630	Boxes, crates, cartons	2
					400	Multiple injuries	3	5400	Steam	2
					110	Asphyxia, strangulation	2	5635	Forklifts, stackers, etc.	2
					160	Contusion, crushing	2	5801	Floor	2
					170	Cut, laceration, puncture	2	201	Animals	1
					200	Electric shock	1	1501	Motors	1
					999	Nonclassifiable	1	1599	Electrical apparatus	1
								1820	Grains and grain products	1
								1840	Meats and meat products	1
								2245	Knife	1
								5840	Stairs, steps	1
								5899	Working surfaces	1
83	794	Commercial Sports	6	7.98	999	Nonclassifiable	2	5620	Highway vehicles	2
					160	Contusion, crushing	1	5810	Ground	2
					210	Fracture	1	201	Animals	1
					400	Multiple injuries	1	6010	Heart failure	1
					991	Heart conditions	1			

Table 5.1 (Cont.)

<i>Industry</i>					<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
84	282	Plastics, Synthetic Materials	15	7.96	400	Multiple injuries	4	1700	Flame, fire, smoke	2
					210	Fracture	3	4120	Bullets	2
					170	Cut, laceration, puncture	2	4300	Mineral items, nonmetallic	2
					551	Malignant tumor	2	1515	Conductors	1
					120	Burn (heat)	1	1599	Electrical apparatus	1
					200	Electric shock	1	2500	Heating equipment	1
					283	Asbestosis	1	4200	Mineral items, metallic	1
					286	Silicosis	1	5200	Silica	1
								5610	Aircraft	1
								5801	Floor	1
								5810	Ground	1
								9800	Nonclassifiable	1
85	336	Nonferrous Foundries	7	7.92	286	Silicosis	4	4600	Particles (unidentified)	2
					210	Fracture	2	988	Plastics	1
					170	Cut, laceration, puncture	1	999	Chemicals and compounds	1
								3750	Saws	1
								4140	Pipe	1
								5635	Forklifts, stackers, etc.	1
86	762	Electrical Repair Shops	7	7.80	991	Heart conditions	3	1700	Flame, fire, smoke	2
					120	Burn (heat)	2	1999	Furniture, fixtures	2
					200	Electric shock	1	999	Chemicals and compounds	1
					286	Silicosis	1	1515	Conductors	1
								6010	Heart failure	1
87	153	Operative Builders	5	7.70	140	Concussion	1	5610	Aircraft	1
					210	Fracture	1	5800	Working surfaces	1
					400	Multiple injuries	1	5801	Floor	1
					995	Other injury, n.e.c.	1	5810	Ground	1
					999	Nonclassifiable	1	9800	Nonclassifiable	1
88	104	Gold and Silver Ores	4	7.69	110	Asphyxia, strangulation	2	935	Carbon monoxide	2
					400	Multiple injuries	2	4300	Mineral items, nonmetallic	2
89	347	Metal Services, n.e.c.	8	7.60	274	Influenza, pneumonia, etc.	2	901	Acids	2
					130	Burn (chemical)	1	910	Alkalies	1
					270	Systemic poisoning	1	945	Cyanide, cyanogen compounds	1
					271	Toxic systemic poisoning	1	950	Halogenated compounds	1
					286	Silicosis	1	2275	Saw	1
					400	Multiple injuries	1	4300	Mineral items, nonmetallic	1
					991	Heart conditions	1	5801	Floor	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
90	753	Automotive Repair Shops	29	7.45	991	Heart conditions	10	5620	Highway vehicles	9
					400	Multiple injuries	5	4110	Automobile parts (metal)	4
					210	Fracture	4	6010	Heart failure	2
					170	Cut, laceration, puncture	2	6210	Tires	2
					999	Nonclassifiable	2	9800	Nonclassifiable	2
					120	Burn (heat)	1	250	Insects	1
					140	Concussion	1	705	Doors, gates	1
					160	Contusion, crushing	1	965	Glue	1
					271	Toxic systemic poisoning	1	999	Chemicals and compounds	1
					286	Silicosis	1	1700	Flame, fire, smoke	1
					551	Malignant tumor	1	2699	Hoisting apparatus	1
								4120	Bullets	1
								5600	Vehicles	1
								5810	Ground	1
								8800	Miscellaneous	1
91	317	Handbags and Leather Goods	2	7.39	991	Heart conditions	2	630	Boxes, crates, cartons	1
								660	Bundles, bales	1
92	138	Oil and Gas Field Services	24	7.39	400	Multiple injuries	15	5620	Highway vehicles	9
					140	Concussion	2	3250	Drilling, turning machines	4
					210	Fracture	2	9800	Nonclassifiable	3
					999	Nonclassifiable	2	5610	Aircraft	2
					200	Electric shock	1	530	Pressure lines	1
					995	Other injury, n.e.c.	1	670	Tanks, bins, etc.	1
					999	Nonclassifiable	1	1515	Conductors	1
								4140	Pipe	1
								4199	Metal items	1
								5801	Floor	1
93	451	Certified Air Transportation	32	7.27	400	Multiple injuries	13	5610	Aircraft	19
					999	Nonclassifiable	6	6010	Heart failure	4
					210	Fracture	5	5620	Highway vehicles	2
					991	Heart conditions	4	201	Animals	1
					120	Burn (heat)	1	900	Chemicals	1
					170	Cut, laceration, puncture	1	4700	Plants, trees, vegetation	1
					271	Toxic systemic poisoning	1	5631	Handtrucks, dollies, etc.	1
					540	Mental disorders	1	5635	Forklifts, stackers, etc.	1
								8800	Miscellaneous	1
								9800	Nonclassifiable	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
94	291	Petroleum Refining	11	7.21	400	Multiple injuries	3	5620	Highway vehicles	2
					999	Nonclassifiable	2	8800	Miscellaneous	2
					110	Asphyxia, strangulation	1	9800	Nonclassifiable	2
					120	Burn (heat)	1	670	Tanks, bins, etc.	1
					170	Cut, laceration, puncture	1	900	Chemicals	1
					210	Fracture	1	1700	Flame, fire, smoke	1
					991	Heart conditions	1	2910	Water	1
					995	Other injury, n.e.c.	1	4120	Bullets	1
95	352	Farm and Garden Machinery	10	7.20	400	Multiple injuries	5	5620	Highway vehicles	4
					210	Fracture	2	5610	Aircraft	3
					999	Nonclassifiable	2	900	Chemicals	1
					120	Burn (heat)	1	1700	Flame, fire, smoke	1
								4155	Metal fasteners	1
96	391	Jewelry, Silverware, etc.	4	7.13	170	Cut, laceration, puncture	1	699	Containers	1
					271	Toxic systemic poisoning	1	900	Chemicals	1
					991	Heart conditions	1	4120	Bullets	1
					999	Nonclassifiable	1	5620	Highway vehicles	1
97	316	Luggage	1	7.12	991	Heart conditions	1	601	Barrels, kegs, drums	1
98	331	Basic Steel Products	29	6.98	400	Multiple injuries	9	2610	Cranes, derricks	4
					286	Silicosis	6	4199	Metal items	2
					991	Heart conditions	4	5200	Silica	2
					120	Burn (heat)	3	5610	Aircraft	2
					160	Contusion, crushing	2	9800	Nonclassifiable	2
					110	Asphyxia, strangulation	1	660	Bundles, bales	1
					170	Cut, laceration, puncture	1	935	Carbon monoxide	1
					210	Fracture	1	985	Metal, n.e.c.	1
					271	Toxic systemic poisoning	1	1501	Motors	1
					999	Nonclassifiable	1	1700	Flame, fire, smoke	1
								2290	Shovel, spade	1
								2500	Heating equipment	1
								2910	Water	1
								3100	Buffers, sanders, grinders	1
								4115	Beams, bars	1
								4140	Pipe	1
								4300	Mineral items, nonmetallic	1
								4600	Particles (unidentified)	1
								5620	Highway vehicles	1
								5631	Handtrucks, dollies, etc.	1

Table 5.1 (Cont.)

Industry			Nature Of Injury Or Illness				Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
98	331	Basic Steel Products (Cont.)						5810	Ground	1
								8800	Miscellaneous	1
99	863	Labor Organizations	10	6.97	400	Multiple injuries	4	6010	Heart failure	3
					991	Heart conditions	3	5620	Highway vehicles	2
					170	Cut, laceration, puncture	1	955	Metallic compounds	1
					283	Asbestosis	1	1930	Desks	1
					510	Cerebrovascular conditions	1	4120	Bullets	1
								4300	Mineral items, nonmetallic	1
								8800	Miscellaneous	1
100	353	Construction Machinery	22	6.86	400	Multiple injuries	5	9800	Nonclassifiable	4
					991	Heart conditions	4	4199	Metal items	2
					160	Contusion, crushing	3	5635	Forklifts, stackers, etc.	2
					286	Silicosis	3	530	Pressure lines	1
					100	Amputation or enucleation	1	1350	Powered conveyors	1
					110	Asphyxia, strangulation	1	2625	Hoists	1
					120	Burn (heat)	1	3250	Drilling, turning machines	1
					140	Concussion	1	4115	Beams, bars	1
					170	Cut, laceration, puncture	1	4300	Mineral items, nonmetallic	1
					210	Fracture	1	4600	Particles (unidentified)	1
					990	Occupational disease	1	5200	Silica	1
								5610	Aircraft	1
								5620	Highway vehicles	1
								5801	Floor	1
								5840	Stairs, steps	1
								6010	Heart failure	1
								8800	Miscellaneous	1
101	504	Sporting, Toy, and Hobby Goods	5	6.82	991	Heart conditions	2	5620	Highway vehicles	2
					210	Fracture	1	699	Containers	1
					400	Multiple injuries	1	5635	Forklifts, stackers, etc.	1
					999	Nonclassifiable	1	9800	Nonclassifiable	1
102	286	Industrial Organic Chemicals	11	6.69	283	Asbestosis	2	999	Chemicals and compounds	3
					551	Malignant tumor	2	9800	Nonclassifiable	2
					999	Nonclassifiable	2	670	Tanks, bins, etc.	1
					110	Asphyxia, strangulation	1	900	Chemicals	1
					271	Toxic systemic poisoning	1	950	Halogenated compounds	1
					274	Influenza, pneumonia, etc.	1	1199	Coal and petroleum products	1
					400	Multiple injuries	1	4600	Particles (unidentified)	1
					991	Heart conditions	1	5635	Forklifts, stackers, etc.	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
103	344	Structural Metal Products	31	6.56	991	Heart conditions	7	5620	Highway vehicles	7
					210	Fracture	5	6010	Heart failure	3
					400	Multiple injuries	5	4199	Metal items	2
					120	Burn (heat)	2	4600	Particles (unidentified)	2
					160	Contusion, crushing	2	5610	Aircraft	2
					271	Toxic systemic poisoning	2	8800	Miscellaneous	2
					110	Asphyxia, strangulation	1	9800	Nonclassifiable	2
					170	Cut, laceration, puncture	1	670	Tanks, bins, etc.	1
					190	Dislocation	1	701	Buildings	1
					283	Asbestosis	1	705	Doors, gates	1
					285	Siderosis	1	940	Carbon tetrachloride	1
					510	Cerebrovascular conditions	1	999	Chemicals and compounds	1
					572	Influenza, pneumonia	1	1700	Flame, fire, smoke	1
					999	Nonclassifiable	1	4115	Beams, bars	1
								4300	Mineral items, nonmetallic	1
								5810	Ground	1
								5820	Roofs	1
								5825	Runways, platforms	1
104	636	Title Insurance	3	6.26	400	Multiple injuries	2	5620	Highway vehicles	2
					991	Heart conditions	1	6010	Heart failure	1
105	323	Products of Purchased Glass	3	6.25	400	Multiple injuries	1	630	Boxes, crates, cartons	2
					510	Cerebrovascular conditions	1	5620	Highway vehicles	1
					991	Heart conditions	1			
106	821	Elementary, Secondary Schools	19	6.19	991	Heart conditions	7	5620	Highway vehicles	3
					110	Asphyxia, strangulation	2	5801	Floor	3
					210	Fracture	2	1200	Cold	2
					220	Effects of cold exposure	2	2910	Water	2
					400	Multiple injuries	2	6010	Heart failure	2
					160	Contusion, crushing	1	935	Carbon monoxide	1
					271	Toxic systemic poisoning	1	1910	Chairs, benches, etc.	1
					400	Multiple injuries	1	1999	Furniture, fixtures	1
					999	Nonclassifiable	1	2290	Shovel, spade	1
								3000	Machines	1
								5810	Ground	1
								8800	Miscellaneous	1
107	287	Agricultural Chemicals	4	6.16	210	Fracture	2	999	Chemicals and compounds	1
					110	Asphyxia, strangulation	1	1960	Lighting equipment	1
					200	Electric shock	1	2610	Cranes, derricks	1

Table 5.1 (Cont.)

<i>Industry</i>		<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>
107	287 Agricultural Chemicals (Cont.)					5620 Highway vehicles	1
108	592 Liquor Stores	8	6.06	170 Cut, laceration, puncture	4	4120 Bullets	4
				400 Multiple injuries	2	630 Boxes, crates, cartons	2
				991 Heart conditions	2	2200 Hand tools, not powered	1
						5620 Highway vehicles	1
109	209 Foods and Kindred Products	10	6.05	110 Asphyxia, strangulation	2	5620 Highway vehicles	2
				400 Multiple injuries	2	8800 Miscellaneous	2
				991 Heart conditions	2	400 Bodily motion	1
				120 Burn (heat)	1	4120 Bullets	1
				170 Cut, laceration, puncture	1	5400 Steam	1
				210 Fracture	1	5631 Handtrucks, dollies, etc.	1
				520 Medical care complications	1	5801 Floor	1
						6010 Heart failure	1
110	238 Miscellaneous Apparel and Accessories	3	6.01	170 Cut, laceration, puncture	1	2245 Knife	1
				400 Multiple injuries	1	5500 Textile items	1
				991 Heart conditions	1	5620 Highway vehicles	1
111	483 Radio and TV Broadcasting	13	6.00	400 Multiple injuries	3	5620 Highway vehicles	3
				991 Heart conditions	3	9800 Nonclassifiable	3
				110 Asphyxia, strangulation	2	1599 Electrical apparatus	1
				999 Nonclassifiable	2	2910 Water	1
				170 Cut, laceration, puncture	1	4120 Bullets	1
				510 Cerebrovascular conditions	1	5610 Aircraft	1
				995 Other injury, n.e.c.	1	5810 Ground	1
						6010 Heart failure	1
						8800 Miscellaneous	1
112	341 Metal Shipping Containers	4	5.99	400 Multiple injuries	2	5635 Forklifts, stackers, etc.	2
				210 Fracture	1	3600 Presses (not printing)	1
				991 Heart conditions	1	8800 Miscellaneous	1
113	572 Household Appliance Stores	5	5.98	991 Heart conditions	3	9800 Nonclassifiable	2
				310 Sprains, strains	1	630 Boxes, crates, cartons	1
				400 Multiple injuries	1	5620 Highway vehicles	1
						6010 Heart failure	1
114	553 Auto and Home Supply Stores	16	5.79	991 Heart conditions	5	5620 Highway vehicles	4
				170 Cut, laceration, puncture	3	4120 Bullets	3
				400 Multiple injuries	3	601 Barrels, kegs, drums	1
				210 Fracture	2	630 Boxes, crates, cartons	1
				999 Nonclassifiable	2	2290 Shovel, spade	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
114	553	Auto and Home Supply Stores (Cont.)			510	Cerebrovascular conditions	1	3999	Machines	1
								4199	Metal items	1
								5810	Ground	1
								6010	Heart failure	1
								6210	Tires	1
								9800	Nonclassifiable	1
115	721	Laundry, Cleaning, etc. Services	21	5.78	991	Heart conditions	9	5620	Highway vehicles	3
					170	Cut, laceration, puncture	4	6010	Heart failure	3
					400	Multiple injuries	3	4120	Bullets	2
					140	Concussion	2	660	Bundles, bales	1
					120	Burn (heat)	1	665	Reels, rolls	1
					160	Contusion, crushing	1	1501	Motors	1
					200	Electric shock	1	1999	Furniture, fixtures	1
								2245	Knife	1
								3600	Presses (not printing)	1
								4115	Beams, bars	1
								5631	Handtrucks, dollies, etc.	1
								5800	Working surfaces	1
								5801	Floor	1
								6020	Another person	1
								8800	Miscellaneous	1
								9800	Nonclassifiable	1
116	545	Dairy Products Stores	2	5.69	170	Cut, laceration, puncture	1	630	Boxes, crates, cartons	1
					991	Heart conditions	1	4120	Bullets	1
117	599	Retail Stores, n.e.c.	16	5.59	286	Silicosis	6	4300	Mineral items, nonmetallic	4
					400	Multiple injuries	5	5620	Highway vehicles	3
					170	Cut, laceration, puncture	2	4120	Bullets	2
					110	Asphyxia, strangulation	1	4600	Particles (unidentified)	2
					210	Fracture	1	899	Ceramic items	1
					991	Heart conditions	1	3999	Machines	1
								5610	Aircraft	1
								5810	Ground	1
								9800	Nonclassifiable	1
118	505	Metals and Minerals, except Oil	8	5.54	400	Multiple injuries	3	665	Reels, rolls	1
					999	Nonclassifiable	2	999	Chemicals and compounds	1
					160	Contusion, crushing	1	4120	Bullets	1
					170	Cut, laceration, puncture	1	4199	Metal items	1
					274	Influenza, pneumonia, etc.	1	5610	Aircraft	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
118	505	Metals and Minerals, except Oil (Cont.)						5620	Highway vehicles	1
								5660	Water vehicles	1
								9800	Nonclassifiable	1
119	511	Paper and Paper Products	9	5.54	991	Heart conditions	5	630	Boxes, crates, cartons	2
					210	Fracture	2	5620	Highway vehicles	2
					999	Nonclassifiable	2	9800	Nonclassifiable	2
								5610	Aircraft	1
								5801	Floor	1
								6010	Heart failure	1
120	239	Miscellaneous Fabricated Textiles	10	5.52	991	Heart conditions	4	665	Reels, rolls	2
					160	Contusion, crushing	3	5620	Highway vehicles	2
					999	Nonclassifiable	2	400	Bodily motion	1
					210	Fracture	1	630	Boxes, crates, cartons	1
								660	Bundles, bales	1
								2610	Cranes, derricks	1
								4199	Metal items	1
								5801	Floor	1
121	726	Funeral Service, Crematories	4	5.49	400	Multiple injuries	2	5801	Floor	2
					210	Fracture	1	630	Boxes, crates, cartons	1
					991	Heart conditions	1	5620	Highway vehicles	1
122	734	Services to Buildings	31	5.48	210	Fracture	7	5620	Highway vehicles	5
					400	Multiple injuries	6	5800	Working surfaces	3
					991	Heart conditions	6	5810	Ground	3
					170	Cut, laceration, puncture	3	601	Barrels, kegs, drums	1
					999	Nonclassifiable	3	705	Doors, gates	1
					200	Electric shock	2	935	Carbon monoxide	1
					110	Asphyxia, strangulation	1	1350	Powered conveyors	1
					120	Burn (heat)	1	1599	Electrical apparatus	1
					160	Contusion, crushing	1	1700	Flame, fire, smoke	1
					300	Scratches, abrasions	1	2290	Shovel, spade	1
								2299	Hand tools, not powered	1
								2320	Hammer, tamper	1
								2620	Elevators	1
								2700	Infectious parasites	1
								3200	Crushing machines	1
								3400	Office machines	1
								4120	Bullets	1
								4700	Plants, trees, vegetation	1

Table 5.1 (Cont.)

Industry			Nature Of Injury Or Illness				Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
122	734	Services to Buildings (Cont.)						5801	Floor	1
								5830	Sidewalks, paths, walkways	1
								6010	Heart failure	1
								6020	Another person	1
								9800	Nonclassifiable	1
123	223	Weaving Mills, Wool	1	5.46	991	Heart conditions	1	9800	Nonclassifiable	1
124	355	Special Industry Machinery	10	5.44	210	Fracture	2	999	Chemicals and compounds	1
					286	Silicosis	2	1520	Switches, circuit breakers	1
					160	Contusion, crushing	1	1840	Meats and meat products	1
					200	Electric shock	1	3300	Earth moving machines	1
					274	Influenza, pneumonia, etc.	1	4140	Pipe	1
					283	Asbestosis	1	4199	Metal items	1
					580	Ill-defined conditions	1	4300	Mineral items, nonmetallic	1
					991	Heart conditions	1	4600	Particles (unidentified)	1
								5200	Silica	1
								6010	Heart failure	1
125	491	Electric Services	22	5.26	200	Electric shock	7	1515	Conductors	7
					991	Heart conditions	4	6010	Heart failure	4
					120	Burn (heat)	3	1599	Electrical apparatus	2
					210	Fracture	3	5620	Highway vehicles	2
					400	Multiple injuries	3	5810	Ground	2
					130	Burn (chemical)	1	1510	Transformers, converters	1
					283	Asbestosis	1	3300	Earth moving machines	1
								4300	Mineral items, nonmetallic	1
								5801	Floor	1
								8800	Miscellaneous	1
126	525	Hardware Stores	8	5.25	400	Multiple injuries	3	5620	Highway vehicles	2
					170	Cut, laceration, puncture	2	630	Boxes, crates, cartons	1
					200	Electric shock	1	1515	Conductors	1
					991	Heart conditions	1	2245	Knife	1
					999	Nonclassifiable	1	4120	Bullets	1
								4199	Metal items	1
								5610	Aircraft	1
127	703	Camps and Trailering Parks	8	5.20	999	Nonclassifiable	3	5620	Highway vehicles	5
					210	Fracture	2	1700	Flame, fire, smoke	1
					400	Multiple injuries	2	5601	Animal drawn vehicles	1
					120	Burn (heat)	1	5810	Ground	1

Table 5.1 (Cont.)

<i>Industry</i>					<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
128	566	Shoe Stores	10	5.13	170	Cut, laceration, puncture	3	4120	Bullets	2
					210	Fracture	3	5620	Highway vehicles	2
					400	Multiple injuries	2	2245	Knife	1
					991	Heart conditions	2	2290	Shovel, spade	1
								5640	Rail vehicles	1
								5801	Floor	1
								5840	Stairs, steps	1
								9800	Nonclassifiable	1
129	393	Musical Instruments	1	5.10	991	Heart conditions	1	6010	Heart failure	1
130	508	Machinery, Equipment, and Supplies	69	5.09	400	Multiple injuries	18	5620	Highway vehicles	28
					991	Heart conditions	14	5610	Aircraft	5
					210	Fracture	10	6010	Heart failure	5
					170	Cut, laceration, puncture	4	699	Containers	3
					999	Nonclassifiable	4	4300	Mineral items, nonmetallic	3
					160	Contusion, crushing	3	1700	Flame, fire, smoke	2
					995	Other injury, n.e.c.	3	4120	Bullets	2
					110	Asphyxia, strangulation	2	5200	Silica	2
					120	Burn (heat)	2	600	Boxes, containers, packages	1
					274	Influenza, pneumonia, etc.	2	630	Boxes, crates, cartons	1
					283	Asbestosis	2	900	Chemicals	1
					286	Silicosis	2	935	Carbon monoxide	1
					200	Electric shock	1	999	Chemicals and compounds	1
					510	Cerebrovascular conditions	1	1120	Crude, fuel oil	1
					572	Influenza, pneumonia	1	2245	Knife	1
								2610	Cranes, derricks	1
								2910	Water	1
								3000	Machines	1
								3050	Agricultural machines	1
								3400	Office machines	1
								5635	Forklifts, stackers, etc.	1
								5638	Powered towing vehicles	1
								5640	Rail vehicles	1
								5801	Floor	1
								5810	Ground	1
								5845	Street, road	1
								9800	Nonclassifiable	1
131	474	Rental of Railroad Cars	2	5.09	210	Fracture	1	999	Chemicals and compounds	1
					271	Toxic systemic poisoning	1	5620	Highway vehicles	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
132	346	Metal Forgings and Stampings	13	5.09	991	Heart conditions	5	665	Reels, rolls	2
					400	Multiple injuries	2	5610	Aircraft	2
					160	Contusion, crushing	1	6010	Heart failure	2
					190	Dislocation	1	630	Boxes, crates, cartons	1
					210	Fracture	1	999	Chemicals and compounds	1
					272	Blood disease	1	3450	Packaging machines	1
					286	Silicosis	1	3650	Printing machines	1
					999	Nonclassifiable	1	4600	Particles (unidentified)	1
								5620	Highway vehicles	1
								8800	Miscellaneous	1
133	351	Engines and Turbines	6	5.08	170	Cut, laceration, puncture	1	5620	Highway vehicles	2
					200	Electric shock	1	8800	Miscellaneous	2
					286	Silicosis	1	1500	Electric apparatus	1
					400	Multiple injuries	1	5200	Silica	1
					991	Heart conditions	1			
					999	Nonclassifiable	1			
134	381	Scientific Instruments	4	5.07	991	Heart conditions	3	6010	Heart failure	2
					110	Asphyxia, strangulation	1	630	Boxes, crates, cartons	1
135	203	Preserved Fruits and Vegetables	12	5.03	210	Fracture	4	400	Bodily motion	1
					400	Multiple injuries	2	755	Walls, fences	1
					160	Contusion, crushing	1	910	Alkalies	1
					190	Dislocation	1	1300	Conveyors	1
					200	Electric shock	1	1515	Conductors	1
					274	Influenza, pneumonia, etc.	1	3999	Machines	1
					310	Sprains, strains	1	5635	Forklifts, stackers, etc.	1
					991	Heart conditions	1	5638	Powered towing vehicles	1
								5801	Floor	1
								5810	Ground	1
								5825	Runways, platforms	1
								9800	Nonclassifiable	1
136	265	Paperboard Containers	10	4.98	991	Heart conditions	4	5620	Highway vehicles	4
					400	Multiple injuries	3	630	Boxes, crates, cartons	1
					110	Asphyxia, strangulation	1	660	Bundles, bales	1
					160	Contusion, crushing	1	3300	Earth moving machines	1
					210	Fracture	1	5635	Forklifts, stackers, etc.	1
								6010	Heart failure	1
			9800	Nonclassifiable	1					

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
137	506	Electrical Goods	22	4.97	991	Heart conditions	8	5620	Highway vehicles	6	
					400	Multiple injuries	3	6010	Heart failure	4	
					120	Burn (heat)	2	630	Boxes, crates, cartons	2	
					200	Electric shock	2	999	Chemicals and compounds	1	
					210	Fracture	2	1501	Motors	1	
					110	Asphyxia, strangulation	1	1515	Conductors	1	
					250	Hernia, rupture	1	1599	Electrical apparatus	1	
					283	Asbestosis	1	1700	Flame, fire, smoke	1	
					286	Silicosis	1	2910	Water	1	
					995	Other injury, n.e.c.	1	3000	Machines	1	
								5200	Silica	1	
								5610	Aircraft	1	
								9800	Nonclassifiable	1	
138	264	Miscellaneous Converted Paper Products	11	4.91	991	Heart conditions	3	6010	Heart failure	2	
					160	Contusion, crushing	1	699	Containers	1	
					160	Contusion, crushing	1	999	Chemicals and compounds	1	
					200	Electric shock	1	1500	Electric apparatus	1	
					400	Multiple injuries	1	2290	Shovel, spade	1	
					400	Multiple injuries	1	2620	Elevators	1	
					510	Cerebrovascular conditions	1	3000	Machines	1	
					991	Heart conditions	1	3600	Presses (not printing)	1	
					995	Other injury, n.e.c.	1	5620	Highway vehicles	1	
								5635	Forklifts, stackers, etc.	1	
139	326	Pottery and Related Products	2	4.87	286	Silicosis	2	5200	Silica	2	
140	501	Motor Vehicle and Automotive Equipment	20	4.86	400	Multiple injuries	9	5620	Highway vehicles	9	
					991	Heart conditions	4	6010	Heart failure	2	
					140	Concussion	2	9800	Nonclassifiable	2	
					120	Burn (heat)	1	599	Pressure vessels	1	
					160	Contusion, crushing	1	600	Boxes, containers, packages	1	
					190	Dislocation	1	1700	Flame, fire, smoke	1	
					200	Electric shock	1	3150	Forging, welding machines	1	
					210	Fracture	1	5610	Aircraft	1	
								5810	Ground	1	
								5840	Stairs, steps	1	
141	521	Lumber, Other Building Materials	16	4.78	400	Multiple injuries	6	5620	Highway vehicles	4	
					210	Fracture	2	5749	Wood items	2	
					991	Heart conditions	2	5810	Ground	2	
					160	Contusion, crushing	1	9800	Nonclassifiable	2	

Table 5.1 (Cont.)

Industry					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
141	521	Lumber, Other Building Materials (Cont.)			170	Cut, laceration, puncture	1	1515	Conductors	1
					200	Electric shock	1	3750	Saws	1
					274	Influenza, pneumonia, etc.	1	4120	Bullets	1
					995	Other injury, n.e.c.	1	5635	Forklifts, stackers, etc.	1
					999	Nonclassifiable	1	5720	Lumber	1
								8800	Miscellaneous	1
142	307	Miscellaneous Plastics Products	24	4.78	210	Fracture	5	5635	Forklifts, stackers, etc.	3
					991	Heart conditions	5	3000	Machines	2
					400	Multiple injuries	4	3999	Machines	2
					160	Contusion, crushing	2	5620	Highway vehicles	2
					170	Cut, laceration, puncture	2	8800	Miscellaneous	2
					120	Burn (heat)	1	630	Boxes, crates, cartons	1
					250	Hernia, rupture	1	665	Reels, rolls	1
					272	Blood disease	1	705	Doors, gates	1
					283	Asbestosis	1	900	Chemicals	1
					572	Influenza, pneumonia	1	950	Halogenated compounds	1
					999	Nonclassifiable	1	999	Chemicals and compounds	1
								1350	Powered conveyors	1
								2000	Glass items	1
								3450	Packaging machines	1
								3600	Presses (not printing)	1
								4120	Bullets	1
								4800	Plastic items	1
								6010	Heart failure	1
143	739	Miscellaneous Business Services	77	4.77	170	Cut, laceration, puncture	26	4120	Bullets	22
					210	Fracture	15	5620	Highway vehicles	20
					400	Multiple injuries	13	6010	Heart failure	4
					991	Heart conditions	9	5610	Aircraft	3
					160	Contusion, crushing	3	5801	Floor	3
					999	Nonclassifiable	3	400	Bodily motion	2
					110	Asphyxia, strangulation	2	2245	Knife	2
					200	Electric shock	2	4140	Pipe	2
					120	Burn (heat)	1	5810	Ground	2
					271	Toxic systemic poisoning	1	5840	Stairs, steps	2
					510	Cerebrovascular conditions	1	630	Boxes, crates, cartons	1
					995	Other injury, n.e.c.	1	660	Bundles, bales	1
								699	Containers	1
								999	Chemicals and compounds	1

Table 5.1 (Cont.)

Industry					Nature Of Injury Or Illness		Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
143	739	Miscellaneous Business Services (Cont.)						1599	Electrical apparatus	1
								1700	Flame, fire, smoke	1
								2200	Hand tools, not powered	1
								2910	Water	1
								3250	Drilling, turning machines	1
								4199	Metal items	1
								4300	Mineral items, nonmetallic	1
								5300	Scrap, debris, waste	1
								5600	Vehicles	1
								5640	Rail vehicles	1
								9800	Nonclassifiable	1
144	233	Women's and Misses' Outerwear	19	4.77	991	Heart conditions	16	665	Reels, rolls	5
					170	Cut, laceration, puncture	1	660	Bundles, bales	3
					210	Fracture	1	6010	Heart failure	2
					510	Cerebrovascular conditions	1	630	Boxes, crates, cartons	1
								699	Containers	1
								705	Doors, gates	1
								2245	Knife	1
								4500	Paper and pulp items	1
								5620	Highway vehicles	1
								5631	Handtrucks, dollies, etc.	1
								5801	Floor	1
								8800	Miscellaneous	1
145	502	Furniture and Home Furnishings	6	4.59	991	Heart conditions	3	5620	Highway vehicles	2
					400	Multiple injuries	2	1930	Desks	1
					160	Contusion, crushing	1	1950	Floor coverings	1
								5830	Sidewalks, paths, walkways	1
								6010	Heart failure	1
146	356	General Industry Machinery	13	4.47	400	Multiple injuries	3	5610	Aircraft	2
					286	Silicosis	2	5620	Highway vehicles	2
					999	Nonclassifiable	2	950	Halogenated compounds	1
					120	Burn (heat)	1	965	Glue	1
					210	Fracture	1	999	Chemicals and compounds	1
					271	Toxic systemic poisoning	1	1700	Flame, fire, smoke	1
					274	Influenza, pneumonia, etc.	1	3999	Machines	1
					572	Influenza, pneumonia	1	4300	Mineral items, nonmetallic	1
					991	Heart conditions	1	5200	Silica	1
								5800	Working surfaces	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
146	356	General Industry Machinery (Cont.)						9800	Nonclassifiable	1
147	211	Cigarettes	2	4.46	170	Cut, laceration, puncture	1	4120	Bullets	1
					400	Multiple injuries	1	5635	Forklifts, stackers, etc.	1
148	507	Hardware, Plumbing, Heating Equipment	11	4.44	400	Multiple injuries	5	5620	Highway vehicles	3
					991	Heart conditions	3	4140	Pipe	2
					210	Fracture	1	9800	Nonclassifiable	2
					995	Other injury, n.e.c.	1	5610	Aircraft	1
					999	Nonclassifiable	1	5801	Floor	1
								5810	Ground	1
								6010	Heart failure	1
149	571	Home Furnishings Stores	17	4.42	991	Heart conditions	9	1999	Furniture, fixtures	4
					170	Cut, laceration, puncture	3	4120	Bullets	3
					510	Cerebrovascular conditions	2	630	Boxes, crates, cartons	2
					140	Concussion	1	5620	Highway vehicles	2
					400	Multiple injuries	1	1900	Furniture, fixtures	1
					999	Nonclassifiable	1	1901	Cabinets, bookcases, etc.	1
								1950	Floor coverings	1
								2290	Shovel, spade	1
								8800	Miscellaneous	1
								9800	Nonclassifiable	1
150	573	Radio, TV, and Music Stores	8	4.36	991	Heart conditions	3	5620	Highway vehicles	3
					400	Multiple injuries	2	630	Boxes, crates, cartons	1
					170	Cut, laceration, puncture	1	1200	Cold	1
					210	Fracture	1	4120	Bullets	1
					999	Nonclassifiable	1	6010	Heart failure	1
								9800	Nonclassifiable	1
151	284	Soap, Cleaners and Toilet Goods	6	4.20	991	Heart conditions	2	400	Bodily motion	1
					159	Other infective disease	1	2700	Infectious parasites	1
					170	Cut, laceration, puncture	1	2910	Water	1
					310	Sprains, strains	1	4120	Bullets	1
					400	Multiple injuries	1	5810	Ground	1
								9800	Nonclassifiable	1
152	752	Automobile Parking	10	4.06	170	Cut, laceration, puncture	3	4120	Bullets	3
					210	Fracture	3	6010	Heart failure	2
					991	Heart conditions	3	9800	Nonclassifiable	2
					160	Contusion, crushing	1	935	Carbon monoxide	1
								2600	Hoisting apparatus	1

Table 5.1 (Cont.)

Industry			Nature Of Injury Or Illness			Source Of Injury Or Illness				
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
152	752	Automobile Parking (Cont.)						6020	Another person	1
153	358	Refrigeration Service Machinery	7	4.03	170	Cut, laceration, puncture	2	4930	Pumps	2
					400	Multiple injuries	2	699	Containers	1
					991	Heart conditions	2	905	Alcohols	1
					130	Burn (chemical)	1	1001	Boots, shoes, etc.	1
								1700	Flame, fire, smoke	1
								3000	Machines	1
154	561	Men's Clothing and Furnishings	5	3.99	991	Heart conditions	3	630	Boxes, crates, cartons	1
					170	Cut, laceration, puncture	2	2245	Knife	1
								4120	Bullets	1
								5620	Highway vehicles	1
								6010	Heart failure	1
155	541	Grocery Stores	88	3.94	170	Cut, laceration, puncture	35	4120	Bullets	29
					991	Heart conditions	28	630	Boxes, crates, cartons	13
					400	Multiple injuries	10	5620	Highway vehicles	11
					210	Fracture	5	2245	Knife	4
					140	Contusion, crushing	2	6010	Heart failure	4
					310	Sprains, strains	2	1840	Meats and meat products	3
					995	Other injury, n.e.c.	2	6020	Another person	3
					240	Effects of heat exposure	1	8800	Miscellaneous	3
					280	Pneumoconiosis	1	9800	Nonclassifiable	3
					572	Influenza, pneumonia	1	5631	Handtrucks, dollies, etc.	2
					999	Nonclassifiable	1	5810	Ground	2
								530	Pressure lines	1
								699	Containers	1
								999	Chemicals and compounds	1
								1120	Crude, fuel oil	1
								1970	Tables	1
								2299	Hand tools, not powered	1
								2400	Heat	1
								4020	Chains, ropes, cables	1
								4140	Pipe	1
								5610	Aircraft	1
								5899	Working surfaces	1
156	516	Chemicals and Allied Products	5	3.91	400	Multiple injuries	2	901	Acids	1
					120	Burn (heat)	1	999	Chemicals and compounds	1
					274	Influenza, pneumonia, etc.	1	1700	Flame, fire, smoke	1
					991	Heart conditions	1	4800	Plastic items	1

Table 5.1 (Cont.)

Industry		Nature Of Injury Or Illness				Source Of Injury Or Illness	
Rank	Code Definition	Deaths	Rate	Code Definition	Deaths	Code Definition	Deaths
156	516 Chemicals and Allied Products (Cont.)					5620 Highway vehicles	1
157	386 Photographic Equipment and Supplies	5	3.86	271 Toxic systemic poisoning	1	900 Chemicals	2
				283 Asbestosis	1	5610 Aircraft	2
				400 Multiple injuries	1	999 Chemicals and compounds	1
				551 Malignant tumor	1		
				999 Nonclassifiable	1		
158	342 Cutlery, Hand Tools, Hardware	6	3.82	400 Multiple injuries	4	5620 Highway vehicles	2
				170 Cut, laceration, puncture	2	3100 Buffers, sanders, grinders	1
						4120 Bullets	1
						6020 Another person	1
						9800 Nonclassifiable	1
159	225 Knitting Mills	8	3.75	210 Fracture	3	660 Bundles, bales	1
				991 Heart conditions	3	2399 Hand tools, powered	1
				120 Burn (heat)	1	2999 Other liquids	1
				570 Respiratory conditions	1	3999 Machines	1
						5500 Textile items	1
						5800 Working surfaces	1
						5801 Floor	1
						6010 Heart failure	1
160	891 Engineering, Architectural Services	22	3.67	400 Multiple injuries	8	5620 Highway vehicles	10
				991 Heart conditions	7	6010 Heart failure	4
				110 Asphyxia, strangulation	3	1599 Electrical apparatus	2
				200 Electric shock	2	2910 Water	2
				210 Fracture	1	600 Boxes, containers, packages	1
				999 Nonclassifiable	1	799 Buildings and structures	1
						5610 Aircraft	1
						8800 Miscellaneous	1
161	324 Cement, Hydraulic	1	3.61	400 Multiple injuries	1	5801 Floor	1
162	731 Advertising	6	3.60	400 Multiple injuries	4	5620 Highway vehicles	2
				991 Heart conditions	2	2299 Hand tools, not powered	1
						5610 Aircraft	1
						5810 Ground	1
						6010 Heart failure	1
163	234 Women's and Children's Underwear	3	3.54	991 Heart conditions	2	660 Bundles, bales	1
				210 Fracture	1	5801 Floor	1
						8800 Miscellaneous	1

Table 5.1 (Cont.)

Industry				Nature Of Injury Or Illness				Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths	
164	283	Drugs	7	3.51	283	Asbestosis	2	4300	Mineral items, nonmetallic	2	
					400	Multiple injuries	2	630	Boxes, crates, cartons	1	
					110	Asphyxia, strangulation	1	999	Chemicals and compounds	1	
					160	Contusion, crushing	1	2910	Water	1	
					271	Toxic systemic poisoning	1	5620	Highway vehicles	1	
								5801	Floor	1	
165	824	Correspondence and Vocational Schools	2	3.44	400	Multiple injuries	1	3400	Office machines	1	
					991	Heart conditions	1	5620	Highway vehicles	1	
166	783	Motion Picture Theaters	4	3.43	210	Fracture	2	3000	Machines	1	
					170	Cut, laceration, puncture	1	4120	Bullets	1	
					991	Heart conditions	1	5620	Highway vehicles	1	
								5801	Floor	1	
167	478	Miscellaneous Transportation Services	3	3.42	160	Contusion, crushing	1	699	Containers	1	
					400	Multiple injuries	1	2610	Cranes, derricks	1	
					991	Heart conditions	1	3300	Earth moving machines	1	
168	349	Miscellaneous Metal Products	8	3.34	400	Multiple injuries	3	5620	Highway vehicles	2	
					110	Asphyxia, strangulation	1	950	Halogenated compounds	1	
					157	Tuberculosis	1	1520	Switches, circuit breakers	1	
					170	Cut, laceration, puncture	1	2700	Infectious parasites	1	
					200	Electric shock	1	4125	Molds	1	
					286	Silicosis	1	5200	Silica	1	
								5899	Working surfaces	1	
169	278	Blankbooks and Book Binding	2	3.13	991	Heart conditions	1	5620	Highway vehicles	1	
					995	Other injury, n.e.c.	1	9800	Nonclassifiable	1	
170	523	Paint, Glass, and Wallpaper Stores	2	3.13	280	Pneumoconiosis	1	630	Boxes, crates, cartons	1	
					400	Multiple injuries	1	965	Glue	1	
171	254	Partitions and Fixtures	2	3.13	200	Electric shock	1	1515	Conductors	1	
					991	Heart conditions	1	1901	Cabinets, bookcases, etc.	1	
172	259	Miscellaneous Furniture, Fixtures	1	3.12	991	Heart conditions	1	8800	Miscellaneous	1	
173	314	Footwear, Except Rubber	4	3.11	400	Multiple injuries	2	2620	Elevators	1	
					991	Heart conditions	2	3900	Stitching, sewing machines	1	
								5899	Working surfaces	1	
								6010	Heart failure	1	
174	543	Fruit and Vegetable Markets	4	3.11	991	Heart conditions	2	630	Boxes, crates, cartons	1	
					170	Cut, laceration, puncture	1	4120	Bullets	1	
					200	Electric shock	1	5810	Ground	1	

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
174	543	Fruit and Vegetable Markets (Cont.)						8800	Miscellaneous	1
175	701	Hotels, Motels, and Tourist Courts	35	3.10	170	Cut, laceration, puncture	12	4120	Bullets	8
					210	Fracture	8	1700	Flame, fire, smoke	3
					991	Heart conditions	6	699	Containers	2
					120	Burn (heat)	3	3050	Agricultural machines	2
					999	Nonclassifiable	2	5801	Floor	2
					110	Asphyxia, strangulation	1	6010	Heart failure	2
					140	Concussion	1	6020	Another person	2
					400	Multiple injuries	1	755	Walls, fences	1
					990	Occupational disease	1	1820	Grains and grain products	1
								1840	Meats and meat products	1
								1890	Food products	1
								2245	Knife	1
								2910	Water	1
								4020	Chains, ropes, cables	1
								4125	Molds	1
								4300	Mineral items, nonmetallic	1
								5620	Highway vehicles	1
								5800	Working surfaces	1
								5840	Stairs, steps	1
								5845	Street, road	1
								9800	Nonclassifiable	1
176	594	Miscellaneous Shopping Goods Stores	20	3.07	170	Cut, laceration, puncture	6	4120	Bullets	5
					991	Heart conditions	6	5620	Highway vehicles	4
					140	Concussion	2	630	Boxes, crates, cartons	1
					210	Fracture	2	665	Reels, rolls	1
					400	Multiple injuries	2	1500	Electric apparatus	1
					110	Asphyxia, strangulation	1	1999	Furniture, fixtures	1
					510	Cerebrovascular conditions	1	2910	Water	1
								4300	Mineral items, nonmetallic	1
								4500	Paper and pulp items	1
								5810	Ground	1
								6010	Heart failure	1
								6020	Another person	1
								8800	Miscellaneous	1
177	343	Plumbing and Heating, except Electrical	2	3.05	286	Silicosis	1	5200	Silica	1
					287	Other pneumoconioses	1	8800	Miscellaneous	1

Table 5.1 (Cont.)

<i>Industry</i>					<i>Nature Of Injury Or Illness</i>		<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
178	348	Ordnance and Accessories	2	3.05	991	Heart conditions	1	3000	Mechines	1
					999	Nonclassifiable	1	6010	Heart failure	1
179	335	Nonferrous Rolling and Drawing	6	3.03	210	Fracture	2	3999	Machines	2
					110	Asphyxia, strangulation	1	705	Doors, gates	1
					140	Concussion	1	4150	Metal parts, except auto	1
					400	Multiple injuries	1	5610	Aircraft	1
					991	Heart conditions	1	5638	Powered towing vehicles	1
180	492	Gas Production and Distribution	5	3.01	210	Fracture	3	5620	Highway vehicles	5
					400	Multiple injuries	1			
					999	Nonclassifiable	1			
181	539	General Merchandise Stores	4	2.99	400	Multiple injuries	3	4120	Bullets	1
					999	Nonclassifiable	1	5620	Highway vehicles	1
								6210	Tires	1
								9800	Nonclassifiable	1
182	655	Subdividers and Developers	4	2.97	200	Electric shock	2	1500	Electric apparatus	1
					170	Cut, laceration, puncture	1	1515	Conductors	1
					400	Multiple injuries	1	4120	Bullets	1
								5640	Rail vehicles	1
183	782	Cinema Distribution and Services	2	2.97	400	Multiple injuries	1	5620	Highway vehicles	1
					991	Heart conditions	1	6010	Heart failure	1
184	373	Ship and Boat Building and Repair	6	2.94	400	Multiple injuries	2	5620	Highway vehicles	2
					120	Burn (heat)	1	8800	Miscellaneous	2
					283	Asbestosis	1	3000	Machines	1
					550	Neoplasm, tumor	1	4130	Molten metal	1
					999	Nonclassifiable	1			
185	764	Upholstery, and Furniture Repair	4	2.93	210	Fracture	1	950	Halogenated compounds	2
					271	Toxic systemic poisoning	1	1900	Furniture, fixtures	1
					572	Influenza, pneumonia	1	5800	Working surfaces	1
					991	Heart conditions	1			
186	371	Motor Vehicles and Equipment	23	2.91	400	Multiple injuries	8	5801	Floor	4
					991	Heart conditions	3	5620	Highway vehicles	3
					170	Cut, laceration, puncture	2	5635	Forklifts, stackers, etc.	3
					210	Fracture	2	6010	Heart failure	3
					999	Nonclassifiable	2	4300	Mineral items, nonmetallic	2
					110	Asphyxia, strangulation	1	5899	Working surfaces	2
					150	Infective disease	1	670	Tanks, bins, etc.	1
					160	Contusion, crushing	1	1700	Flame, fire, smoke	1

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
186	371	Motor Vehicles and Equipment (Cont.)			200	Electric shock	1	3200	Crushing machines	1
					280	Pneumoconiosis	1	4600	Particles (unidentified)	1
					572	Influenza, pneumonia	1	5070	Arc-welding equipment	1
								5660	Water vehicles	1
187	222	Weaving Mills, Synthetics	3	2.87	999	Nonclassifiable	2	5620	Highway vehicles	1
					140	Concussion	1	5801	Floor	1
								5810	Ground	1
188	395	Office and Art Supplies	1	2.81	991	Heart conditions	1	630	Boxes, crates, cartons	1
189	306	Fabricated Rubber Products	3	2.80	120	Burn (heat)	1	999	Chemicals and compounds	1
					271	Toxic systemic poisoning	1	5400	Steam	1
					999	Nonclassifiable	1	5899	Working surfaces	1
190	733	Mailing, Reproduction, Stenographic	4	2.74	170	Cut, laceration, puncture	1	1970	Tables	1
					240	Effects of heat exposure	1	3150	Forging, welding machines	1
					991	Heart conditions	1	4120	Bullets	1
					999	Nonclassifiable	1	5620	Highway vehicles	1
191	362	Electrical Industrial Apparatus	6	2.74	170	Cut, laceration, puncture	2	1350	Powered conveyors	1
					400	Multiple injuries	2	4125	Molds	1
					160	Contusion, crushing	1	4199	Metal items	1
					286	Silicosis	1	4200	Mineral items, metallic	1
								5620	Highway vehicles	1
								5635	Forklifts, stackers, etc.	1
192	231	Men's and Boys' Suits and Coats	2	2.72	991	Heart conditions	2	1099	Apparel	1
								4199	Metal items	1
193	322	Glasswear, Pressed or Blown	3	2.70	200	Electric shock	1	1501	Motors	1
					400	Multiple injuries	1	5620	Highway vehicles	1
					999	Nonclassifiable	1	9800	Nonclassifiable	1
194	446	Water Transportation Services	3	2.69	210	Fracture	2	630	Boxes, crates, cartons	1
					991	Heart conditions	1	5635	Forklifts, stackers, etc.	1
								5730	Skids, pallets	1
195	603	Mutual Savings Banks	2	2.66	170	Cut, laceration, puncture	1	4120	Bullets	1
					991	Heart conditions	1	5620	Highway vehicles	1
196	423	Trucking Terminal Facilities	1	2.64	120	Burn (heat)	1	5620	Highway vehicles	1
197	621	Security Brokers and Dealers	6	2.62	210	Fracture	2	5620	Highway vehicles	2
					160	Contusion, crushing	1	400	Bodily motion	1
					400	Multiple injuries	1	1930	Desks	1
					510	Cerebrovascular conditions	1	5800	Working surfaces	1

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
197	621	Security Brokers and Dealers (Cont.)			991	Heart conditions	1	6010	Heart failure	1	
198	864	Civic and Social Associations	9	2.62	110	Asphyxia, strangulation	2	2910	Water	2	
					170	Cut, laceration, puncture	2	5840	Stairs, steps	1	
					991	Heart conditions	2	630	Boxes, crates, cartons	1	
					200	Electric shock	1	1515	Conductors	1	
					210	Fracture	1	4120	Bullets	1	
					995	Other injury, n.e.c.	1	5801	Floor	1	
								9800	Nonclassifiable	1	
199	472	Arrangement of Transport	4	2.61	120	Burn (heat)	1	5620	Highway vehicles	2	
					170	Cut, laceration, puncture	1	4120	Bullets	1	
					991	Heart conditions	1	6010	Heart failure	1	
					999	Nonclassifiable	1				
200	361	Electric Distributing Equipment	3	2.58	160	Contusion, crushing	1	1599	Electrical apparatus	1	
					200	Electric shock	1	5620	Highway vehicles	1	
					999	Nonclassifiable	1	5635	Forklifts, stackers, etc.	1	
201	839	Social Services, n.e.c.	6	2.57	400	Multiple injuries	2	5620	Highway vehicles	4	
					110	Asphyxia, strangulation	1	660	Bundles, bales	1	
					210	Fracture	1	2910	Water	1	
					991	Heart conditions	1				
					999	Nonclassifiable	1				
202	385	Ophthalmic Goods	1	2.41	400	Multiple injuries	1	5830	Sidewalks, paths, walkways	1	
203	832	Individual and Family Services	6	2.39	210	Fracture	3	5800	Working surfaces	2	
					991	Heart conditions	2	630	Boxes, crates, cartons	1	
					510	Cerebrovascular conditions	1	5801	Floor	1	
								6010	Heart failure	1	
								9800	Nonclassifiable	1	
204	527	Mobile Home Dealers	4	2.39	400	Multiple injuries	2	5620	Highway vehicles	2	
					999	Nonclassifiable	2	5610	Aircraft	1	
								9800	Nonclassifiable	1	
205	615	Business Credit Institutions	1	2.37	140	Concussion	1	5620	Highway vehicles	1	
206	781	Cinema Production and Services	2	2.32	210	Fracture	1	1501	Motors	1	
					991	Heart conditions	1	5845	Street, road	1	
207	633	Fire, Marine, and Casualty Insurance	11	2.30	400	Multiple injuries	3	5620	Highway vehicles	6	
					210	Fracture	2	9800	Nonclassifiable	2	
					991	Heart conditions	2	1930	Desks	1	
					160	Contusion, crushing	1	6010	Heart failure	1	

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
207	633	Fire, Marine, and Casualty Insurance (Cont.)			170	Cut, laceration, puncture	1	6020	Another person	1
					510	Cerebrovascular conditions	1			
					999	Nonclassifiable	1			
208	596	Nonstore Retailers	6	2.25	991	Heart conditions	2	5620	Highway vehicles	3
					120	Burn (heat)	1	630	Boxes, crates, cartons	1
					140	Concussion	1	999	Chemicals and compounds	1
					400	Multiple injuries	1	5730	Skids, pallets	1
					999	Nonclassifiable	1			
209	861	Business Associations	2	2.20	400	Multiple injuries	1	5620	Highway vehicles	1
					991	Heart conditions	1	6010	Heart failure	1
210	396	Costume Jewelry and Notions	1	2.16	210	Fracture	1	5801	Floor	1
211	359	Miscellaneous Machinery, except Electrical	6	2.15	991	Heart conditions	2	4199	Metal items	2
					210	Fracture	1	950	Halogenated compounds	1
					250	Hernia, rupture	1	6010	Heart failure	1
					271	Toxic systemic poisoning	1	6020	Another person	1
					999	Nonclassifiable	1	9800	Nonclassifiable	1
212	213	Chewing and Smoking Tobacco	2	2.15	120	Burn (heat)	2	5400	Steam	2
213	279	Printing Trade Services	1	2.14	991	Heart conditions	1	6010	Heart failure	1
214	481	Telephone Communication	21	2.13	210	Fracture	8	5620	Highway vehicles	8
					991	Heart conditions	5	1515	Conductors	2
					120	Burn (heat)	2	1700	Flame, fire, smoke	2
					160	Contusion, crushing	2	5810	Ground	2
					400	Multiple injuries	2	6010	Heart failure	2
					200	Electric shock	1	400	Bodily motion	1
					999	Nonclassifiable	1	630	Boxes, crates, cartons	1
								2641	Air hoist	1
								5749	Wood items	1
								5845	Street, road	1
215	565	Family Clothing Stores	4	2.09	170	Cut, laceration, puncture	2	2245	Knife	1
					310	Sprains, strains	1	5610	Aircraft	1
					999	Nonclassifiable	1	5801	Floor	1
								9800	Nonclassifiable	1
216	272	Periodicals	2	2.08	400	Multiple injuries	2	5610	Aircraft	1
								5620	Highway vehicles	1

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
217	365	Radio and TV Receiving Equipment	2	2.07	140	Concussion	1	3999	Machines	1	
					991	Heart conditions	1	5801	Floor	1	
218	131	Crude Oil and Natural Gas	5	2.07	400	Multiple injuries	3	5620	Highway vehicles	3	
					110	Asphyxia, strangulation	1	530	Pressure lines	1	
					210	Fracture	1	3250	Drilling, turning machines	1	
219	275	Commercial Printing	9	2.01	991	Heart conditions	4	630	Boxes, crates, cartons	2	
					170	Cut, laceration, puncture	2	4120	Bullets	2	
					210	Fracture	1	5620	Highway vehicles	2	
					274	Influenza, pneumonia, etc.	1	660	Bundles, bales	1	
					999	Nonclassifiable	1	665	Reels, rolls	1	
								900	Chemicals	1	
220	78	Landscape, Horticultural Services	18	1.98	210	Fracture	5	5620	Highway vehicles	4	
					400	Multiple injuries	3	2290	Shovel, spade	2	
					991	Heart conditions	3	4300	Mineral items, nonmetallic	2	
					160	Contusion, crushing	2	4700	Plants, trees, vegetation	2	
					200	Electric shock	2	5810	Ground	2	
					110	Asphyxia, strangulation	1	699	Containers	1	
					140	Concussion	1	1515	Conductors	1	
					999	Nonclassifiable	1	1599	Electrical apparatus	1	
								2399	Hand tools, powered	1	
								2610	Cranes, derricks	1	
								3300	Earth moving machines	1	
221	357	Office and Computing Machines	9	1.98	210	Fracture	2	5620	Highway vehicles	4	
					991	Heart conditions	2	699	Containers	1	
					170	Cut, laceration, puncture	1	900	Chemicals	1	
					270	Systemic poisoning	1	4120	Bullets	1	
					400	Multiple injuries	1	5100	Soaps, detergents, cleaners	1	
					551	Malignant tumor	1	5800	Working surfaces	1	
					999	Nonclassifiable	1				
222	273	Books	2	1.93	110	Asphyxia, strangulation	1	1700	Flame, fire, smoke	1	
					210	Fracture	1	5620	Highway vehicles	1	
223	121	Bituminous Coal and Lignite	23	1.92	400	Multiple injuries	10	4300	Mineral items, nonmetallic	7	
					210	Fracture	5	1140	Hydrocarbon gases	3	
					271	Toxic systemic poisoning	3	3300	Earth moving machines	3	
					110	Asphyxia, strangulation	2	1101	Coal	2	
					160	Contusion, crushing	1	3350	Mining machinery	2	
					200	Electric shock	1	1515	Conductors	1	

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
223	121	Bituminous Coal and Lignite (Cont.)			310	Sprains, strains	1	2360	Screwdriver, bolt setter	1
								2620	Elevators	1
								5620	Highway vehicles	1
								5640	Rail vehicles	1
								5810	Ground	1
224	635	Safety Insurance	1	1.90	400	Multiple injuries	1	5640	Rail vehicles	1
225	369	Electrical Equipment and Supplies	3	1.89	991	Heart conditions	2	5899	Working surfaces	1
					210	Fracture	1	6010	Heart failure	1
								9800	Nonclassifiable	1
226	227	Floor Covering Mills	1	1.83	210	Fracture	1	5801	Floor	1
227	394	Toys and Sporting Goods	2	1.81	400	Multiple injuries	1	5801	Floor	1
					991	Heart conditions	1	8800	Miscellaneous	1
228	461	Pipe Lines, except Natural Gas	2	1.67	120	Burn (heat)	1	1700	Flame, fire, smoke	1
					400	Multiple injuries	1	5620	Highway vehicles	1
229	562	Women's Ready-to-Wear Stores	6	1.65	991	Heart conditions	3	630	Boxes, crates, cartons	1
					140	Concussion	1	705	Doors, gates	1
					210	Fracture	1	5610	Aircraft	1
					400	Multiple injuries	1	5620	Highway vehicles	1
								5730	Skids, pallets	1
								6010	Heart failure	1
230	833	Job Training and Related Services	3	1.59	210	Fracture	1	5620	Highway vehicles	2
					400	Multiple injuries	1	6010	Heart failure	1
					991	Heart conditions	1			
231	736	Personnel Supply Services	11	1.56	400	Multiple injuries	4	5620	Highway vehicles	4
					999	Nonclassifiable	2	2620	Elevators	1
					110	Asphyxia, strangulation	1	2910	Water	1
					120	Burn (heat)	1	5635	Forklifts, stackers, etc.	1
					160	Contusion, crushing	1	5640	Rail vehicles	1
					210	Fracture	1	5810	Ground	1
					995	Other injury, n.e.c.	1	6010	Heart failure	1
								8800	Miscellaneous	1
232	221	Weaving Mills, Cotton	2	1.56	200	Electric shock	1	3950	Weaving, spinning machines	1
					400	Multiple injuries	1	5620	Highway vehicles	1
233	382	Measuring and Controlling Devices	4	1.55	400	Multiple injuries	2	2610	Cranes, derricks	1
					210	Fracture	1	4300	Mineral items, nonmetallic	1
					283	Asbestosis	1	5620	Highway vehicles	1

Table 5.1 (Cont.)

Industry			Nature Of Injury Or Illness				Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
233	382	Measuring and Controlling Devices (Cont.)						5631	Handtrucks, dollies, etc.	1
234	364	Electrical Lighting and Wiring Equipment	3	1.47	210	Fracture	2	965	Gluc	1
					572	Influenza, pneumonia	1	5800	Working surfaces	1
								5810	Ground	1
235	552	Used Car Dealers	4	1.43	120	Burn (heat)	1	1700	Flame, fire, smoke	1
					200	Electric shock	1	3150	Forging, welding machines	1
					210	Fracture	1	5610	Aircraft	1
					400	Multiple injuries	1	5800	Working surfaces	1
236	602	Commercial and Stock Savings Banks	21	1.42	210	Fracture	5	8800	Miscellaneous	4
					400	Multiple injuries	5	5801	Floor	3
					170	Cut, laceration, puncture	3	4120	Bullets	2
					991	Heart conditions	3	5610	Aircraft	2
					120	Burn (heat)	1	5620	Highway vehicles	2
					200	Electric shock	1	6010	Heart failure	2
					260	Inflammation of joints	1	1515	Conductors	1
					274	Influenza, pneumonia, etc.	1	5810	Ground	1
					310	Sprains, strains	1	5830	Sidewalks, paths, walkways	1
								5840	Stairs, steps	1
								5845	Street, road	1
								6020	Another person	1
237	637	Pension, Health, and Welfare Funds	2	1.36	991	Heart conditions	2	6010	Heart failure	2
238	822	Colleges and Universities	10	1.32	991	Heart conditions	5	6010	Heart failure	4
					160	Contusion, crushing	1	660	Bundles, bales	1
					170	Cut, laceration, puncture	1	1999	Furniture, fixtures	1
					272	Blood disease	1	5000	Radiating substances	1
					400	Multiple injuries	1	5610	Aircraft	1
					999	Nonclassifiable	1	5620	Highway vehicles	1
								5801	Floor	1
239	632	Medical and Health Insurance	2	1.32	400	Multiple injuries	1	630	Boxes, crates, cartons	1
					991	Heart conditions	1	5620	Highway vehicles	1
240	384	Medical Instruments and Supplies	2	1.25	400	Multiple injuries	1	4300	Mineral items, nonmetallic	1
					551	Malignant tumor	1	5610	Aircraft	1
241	555	Boat Dealers	2	1.21	210	Fracture	2	9800	Nonclassifiable	2
242	354	Metal Working Machinery	4	1.20	400	Multiple injuries	2	1515	Conductors	1
					160	Contusion, crushing	1	3000	Machines	1
					170	Cut, laceration, puncture	1	4120	Bullets	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
242	354	Metal Working Machinery (Cont.)						5801	Floor	1
243	805	Nursing, and Care Facilities	13	1.19	991	Heart conditions	3	9800	Nonclassifiable	3
					310	Sprains, strains	2	5610	Aircraft	2
					400	Multiple injuries	2	6020	Another person	2
					510	Cerebrovascular conditions	2	630	Boxes, crates, cartons	1
					100	Amputation or enucleation	1	1599	Electrical apparatus	1
					140	Concussion	1	2295	Wrench	1
					330	Hepatitis	1	2700	Infectious parasites	1
					999	Nonclassifiable	1	5801	Floor	1
								6010	Heart failure	1
244	531	Department Stores	22	1.16	400	Multiple injuries	5	5620	Highway vehicles	5
					991	Heart conditions	5	4120	Bullets	3
					210	Fracture	3	5801	Floor	3
					170	Cut, laceration, puncture	2	1999	Furniture, fixtures	2
					310	Sprains, strains	2	6020	Another person	2
					999	Nonclassifiable	2	755	Walls, fences	1
					140	Concussion	1	1910	Chairs, benches, etc.	1
					159	Other infective disease	1	2500	Heating equipment	1
					160	Contusion, crushing	1	2620	Elevators	1
								2700	Infectious parasites	1
								5635	Forklifts, stackers, etc.	1
								5800	Working surfaces	1
245	591	Drug and Proprietary Stores	6	1.16	991	Heart conditions	4	630	Boxes, crates, cartons	3
					170	Cut, laceration, puncture	1	4120	Bullets	1
					250	Hernia, rupture	1	5840	Stairs, steps	1
								8800	Miscellaneous	1
246	836	Residential Care	3	1.14	110	Asphyxia, strangulation	1	400	Bodily motion	1
					510	Cerebrovascular conditions	1	2910	Water	1
					991	Heart conditions	1	9800	Nonclassifiable	1
247	631	Life Insurance	6	1.12	400	Multiple injuries	3	5610	Aircraft	2
					120	Burn (heat)	1	5620	Highway vehicles	2
					210	Fracture	1	5810	Ground	1
					991	Heart conditions	1	6010	Heart failure	1
248	806	Hospitals	31	1.08	991	Heart conditions	8	6020	Another person	5
					210	Fracture	5	9800	Nonclassifiable	4
					170	Cut, laceration, puncture	3	4120	Bullets	3
					160	Contusion, crushing	2	5801	Floor	3

Table 5.1 (Cont.)

<i>Industry</i>		<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
248	806	Hospitals (Cont.)			190	Dislocation	2	2700	Infectious parasites	2
					330	Hepatitis	2	5620	Highway vehicles	2
					400	Multiple injuries	2	6010	Heart failure	2
					999	Nonclassifiable	2	501	Boilers	1
					120	Burn (heat)	1	699	Containers	1
					140	Concussion	1	755	Walls, fences	1
					274	Influenza, pneumonia, etc.	1	1700	Flame, fire, smoke	1
					283	Asbestosis	1	1920	Counters, benches, etc.	1
					310	Sprains, strains	1	1970	Tables	1
								2295	Wrench	1
								4300	Mineral items, nonmetallic	1
								5810	Ground	1
								5840	Stairs, steps	1
249	612	Savings and Loan Associations	3	1.03	110	Asphyxia, strangulation	1	3999	Machines	1
					400	Multiple injuries	1	6020	Another person	1
					991	Heart conditions	1	9800	Nonclassifiable	1
250	367	Electronic Components and Accessories	6	1.02	991	Heart conditions	2	9800	Nonclassifiable	2
					283	Asbestosis	1	999	Chemicals and compounds	1
					287	Other pneumoconioses	1	3000	Machines	1
					400	Multiple injuries	1	4115	Beams, bars	1
					999	Nonclassifiable	1	4200	Mineral items, metallic	1
251	892	Noncommercial Research Organizations	1	1.01	991	Heart conditions	1	4500	Paper and pulp items	1
252	737	Computer and Data Processing Services	4	1.00	400	Multiple injuries	2	5620	Highway vehicles	3
					170	Cut, laceration, puncture	1	4120	Bullets	1
					210	Fracture	1			
253	793	Bowling and Billiards	1	0.99	210	Fracture	1	5800	Working surfaces	1
254	345	Screw Machine Products, Bolts, etc.	1	0.98	400	Multiple injuries	1	5610	Aircraft	1
255	614	Personal Credit Institutions	2	0.96	210	Fracture	1	9800	Nonclassifiable	2
					991	Heart conditions	1			
256	807	Medical and Dental Labs	1	0.95	274	Influenza, pneumonia, etc.	1	900	Chemicals	1
257	616	Mortgage Bankers and Brokers	1	0.95	400	Multiple injuries	1	5620	Highway vehicles	1
258	549	Miscellaneous Food Stores	2	0.94	210	Fracture	1	630	Boxes, crates, cartons	1
					991	Heart conditions	1	5620	Highway vehicles	1
259	366	Communication Equipment	5	0.90	170	Cut, laceration, puncture	1	5620	Highway vehicles	2
					310	Sprains, strains	1	665	Reels, rolls	1
					400	Multiple injuries	1	4120	Bullets	1

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>				
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
259	366	Communication Equipment (Cont.)			991	Heart conditions	1	9800	Nonclassifiable	1
					999	Nonclassifiable	1			
260	232	Men's and Boys' Furnishings	3	0.88	200	Electric shock	1	999	Chemicals and compounds	1
					572	Influenza, pneumonia	1	1599	Electrical apparatus	1
					999	Nonclassifiable	1	5620	Highway vehicles	1
261	263	Paperboard Mills	3	0.83	120	Burn (heat)	1	660	Bundles, bales	1
					160	Contusion, crushing	1	4130	Molten metal	1
					210	Fracture	1	5620	Highway vehicles	1
262	801	Offices of Physicians	7	0.83	170	Cut, laceration, puncture	2	2245	Knife	1
					159	Other infective disease	1	2700	Infectious parasites	1
					400	Multiple injuries	1	4135	Nails, spikes, etc.	1
					540	Mental disorders	1	5080	X-ray equipment	1
					551	Malignant tumor	1	5600	Vehicles	1
					999	Nonclassifiable	1	6010	Heart failure	1
								9800	Nonclassifiable	1
263	802	Offices of Dentists	3	0.78	160	Contusion, crushing	1	5620	Highway vehicles	2
					400	Multiple injuries	1	1960	Lighting equipment	1
					999	Nonclassifiable	1			
264	671	Holding Offices	3	0.72	400	Multiple injuries	2	5620	Highway vehicles	2
					991	Heart conditions	1	400	Bodily motion	1
265	792	Orchestras and Entertainers	4	0.70	400	Multiple injuries	2	5620	Highway vehicles	3
					991	Heart conditions	1	400	Bodily motion	1
					999	Nonclassifiable	1			
266	724	Barber Shops	1	0.70	210	Fracture	1	701	Buildings	1
267	723	Beauty Shops	2	0.65	274	Influenza, pneumonia, etc.	1	705	Doors, gates	1
					991	Heart conditions	1	946	Cosmetics	1
268	835	Child Day Care Services	2	0.64	170	Cut, laceration, puncture	2	4120	Bullets	2
269	363	Household Appliances	1	0.64	120	Burn (heat)	1	699	Containers	1
270	372	Aircraft and Parts	4	0.63	991	Heart conditions	2	2230	Hammer, sledge, mallet	1
					210	Fracture	1	5620	Highway vehicles	1
					400	Multiple injuries	1	5810	Ground	1
								9800	Nonclassifiable	1
271	893	Accounting, Auditing, and Bookkeeping	2	0.56	991	Heart conditions	1	5810	Ground	1
					999	Nonclassifiable	1	9800	Nonclassifiable	1
272	563	Women's Specialty Stores	1	0.52	170	Cut, laceration, puncture	1	2245	Knife	1

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	
273	808	Outpatient Care Facilities	1	0.50	210	Fracture	1	5620	Highway vehicles	1	
274	261	Pulp Mills	1	0.50	995	Other injury, n.e.c.	1	8800	Miscellaneous	1	
275	641	Insurance Agents, Brokers, and Services	15	0.50	991	Heart conditions	6	5620	Highway vehicles	4	
					400	Multiple injuries	4	5610	Aircraft	2	
					170	Cut, laceration, puncture	2	6010	Heart failure	2	
					210	Fracture	1	630	Boxes, crates, cartons	1	
					572	Influenza, pneumonia	1	699	Containers	1	
					999	Nonclassifiable	1	1999	Furniture, fixtures	1	
								4120	Bullets	1	
								4600	Particles (unidentified)	1	
								5845	Street, road	1	
								9800	Nonclassifiable	1	
276	754	Auto Services, except Repair	2	0.45	279	Toxic effects, one system	1	910	Alkalies	1	
					991	Heart conditions	1	6010	Heart failure	1	
277	862	Professional Organizations	1	0.44	210	Fracture	1	5620	Highway vehicles	1	
278	673	Trusts	1	0.44	140	Concussion	1	5810	Ground	1	
279	581	Eating and Drinking Places	123	0.40	170	Cut, laceration, puncture	52	4120	Bullets	37	
					991	Heart conditions	35	5620	Highway vehicles	12	
					210	Fracture	9	9800	Nonclassifiable	9	
					400	Multiple injuries	8	630	Boxes, crates, cartons	8	
					110	Asphyxia, strangulation	6	699	Containers	6	
					999	Nonclassifiable	4	6010	Heart failure	6	
					120	Burn (heat)	3	6020	Another person	5	
					160	Contusion, crushing	2	8800	Miscellaneous	5	
					190	Dislocation	1	2910	Water	4	
					274	Influenza, pneumonia, etc.	1	5801	Floor	4	
					286	Silicosis	1	1700	Flame, fire, smoke	3	
					572	Influenza, pneumonia	1	2245	Knife	3	
								1970	Tables	2	
								4600	Particles (unidentified)	2	
								5610	Aircraft	2	
								400	Bodily motion	1	
								610	Pots and pans	1	
								615	Cans	1	
								660	Bundles, bales	1	
								670	Tanks, bins, etc.	1	
								1140	Hydrocarbon gases	1	

Table 5.1 (Cont.)

<i>Industry</i>			<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
279	581	Eating and Drinking Places (Cont.)						1820	Grains and grain products	1
								2200	Hand tools, not powered	1
								2500	Heating equipment	1
								2620	Elevators	1
								2699	Hoisting apparatus	1
								4020	Chains, ropes, cables	1
								4199	Metal items	1
								5720	Lumber	1
								5840	Stairs, steps	1
280	811	Legal Services	13	0.37	991	Heart conditions	4	4120	Bullets	2
					170	Cut, laceration, puncture	2	5610	Aircraft	2
					400	Multiple injuries	2	5620	Highway vehicles	2
					999	Nonclassifiable	2	400	Bodily motion	1
					160	Contusion, crushing	1	605	Bags	1
					210	Fracture	1	1170	Manufactured gases	1
					540	Mental disorders	1	4500	Paper and pulp items	1
								5800	Working surfaces	1
								5840	Stairs, steps	1
								6010	Heart failure	1
281	866	Religious Organizations	12	0.23	991	Heart conditions	4	5620	Highway vehicles	4
					400	Multiple injuries	2	6010	Heart failure	2
					110	Asphyxia, strangulation	1	250	Insects	1
					160	Contusion, crushing	1	630	Boxes, crates, cartons	1
					271	Toxic systemic poisoning	1	2910	Water	1
					310	Sprains, strains	1	5720	Lumber	1
					995	Other injury, n.e.c.	1	5801	Floor	1
					999	Nonclassifiable	1	5840	Stairs, steps	1
282	804	Health Practitioners Office	1	0.13	991	Heart conditions	1	8800	Miscellaneous	1
283	401	Railroads	1	0.04	210	Fracture	1	5640	Rail vehicles	1
NA	19	General Farms, Crop Farms	50	NA	400	Multiple injuries	18	5620	Highway vehicles	11
					999	Nonclassifiable	6	3050	Agricultural machines	7
					110	Asphyxia, strangulation	5	5638	Powered towing vehicles	4
					200	Electric shock	5	9800	Nonclassifiable	4
					160	Contusion, crushing	4	3300	Earth moving machines	3
					995	Other injury, n.e.c.	4	5810	Ground	3
					210	Fracture	2	6010	Heart failure	2
					991	Heart conditions	2	200	Live animals, birds, etc.	1

Table 5.1 (Cont.)

Industry			Nature Of Injury Or Illness				Source Of Injury Or Illness			
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths	Code	Definition	Deaths
NA	19	General Farms, Crop Farms (Cont.)			140	Concussion	1	201	Animals	1
					170	Cut, laceration, puncture	1	705	Doors, gates	1
					240	Effects of heat exposure	1	740	Scaffolds, staging, etc.	1
					260	Inflammation of joints	1	999	Chemicals and compounds	1
								1099	Apparel	1
								1500	Electric apparatus	1
								1515	Conductors	1
								1820	Grains and grain products	1
								2400	Heat	1
								2500	Heating equipment	1
								2910	Water	1
								4199	Metal items	1
								5635	Forklifts, stackers, etc.	1
								5800	Working surfaces	1
								8800	Miscellaneous	1
NA	999	Nonclassifiable	42	NA	991	Heart conditions	15	5600	Vehicles	4
					210	Fracture	9	5620	Highway vehicles	4
					999	Nonclassifiable	6	9800	Nonclassifiable	4
					400	Multiple injuries	3	665	Reels, rolls	2
					110	Asphyxia, strangulation	2	799	Buildings and structures	2
					170	Cut, laceration, puncture	2	1700	Flame, fire, smoke	2
					286	Silicosis	2	4115	Beams, bars	2
					310	Sprains, strains	2	5200	Silica	2
					200	Electric shock	1	5730	Skids, pallets	2
								6010	Heart failure	2
								530	Pressure lines	1
								1599	Electrical apparatus	1
								1930	Desks	1
								2000	Glass items	1
								2200	Hand tools, not powered	1
								2299	Hand tools, not powered	1
								2355	Saw	1
								4120	Bullets	1
								4199	Metal items	1
								4700	Plants, trees, vegetation	1
								5610	Aircraft	1
								5700	Wood items	1
								5801	Floor	1
								5810	Ground	1

Table 5.1 (Cont.)

<i>Industry</i>		<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>
NA	999 Nonclassifiable (Cont.)					5845 Street, road	1
						8800 Miscellaneous	1
NA	149 Miscellaneous Nonmetallic Minerals	32	NA	280 Pneumoconiosis	14	4300 Mineral items, nonmetallic	16
				286 Silicosis	7	999 Chemicals and compounds	5
				287 Other pneumoconioses	4	4600 Particles (unidentified)	4
				289 Pneumoconiosis with TB	2	5200 Silica	3
				160 Contusion, crushing	1	935 Carbon monoxide	1
				271 Toxic systemic poisoning	1	4030 Drums, pulleys, sheaves	1
				274 Influenza, pneumonia, etc.	1	4200 Mineral items, metallic	1
				400 Multiple injuries	1	5620 Highway vehicles	1
				991 Heart conditions	1		
NA	24 Dairy Farms	24	NA	400 Multiple injuries	7	5620 Highway vehicles	6
				210 Fracture	6	3050 Agricultural machines	3
				110 Asphyxia, strangulation	4	3999 Machines	3
				160 Contusion, crushing	3	5638 Powered towing vehicles	3
				120 Burn (heat)	1	8800 Miscellaneous	2
				200 Electric shock	1	201 Animals	1
				270 Systemic poisoning	1	900 Chemicals	1
				271 Toxic systemic poisoning	1	935 Carbon monoxide	1
						999 Chemicals and compounds	1
						1140 Hydrocarbon gases	1
						1700 Flame, fire, smoke	1
						3300 Earth moving machines	1
NA	799 Miscellaneous Recreational Services	23	NA	400 Multiple injuries	7	5620 Highway vehicles	3
				991 Heart conditions	5	4120 Bullets	2
				210 Fracture	4	6010 Heart failure	2
				170 Cut, laceration, puncture	2	6100 Athletic equipment	2
				200 Electric shock	2	699 Containers	1
				110 Asphyxia, strangulation	1	750 Towers, poles, etc.	1
				120 Burn (heat)	1	1500 Electric apparatus	1
				999 Nonclassifiable	1	1700 Flame, fire, smoke	1
						2625 Hoists	1
						3999 Machines	1
						4700 Plants, trees, vegetation	1
						5610 Aircraft	1
						5801 Floor	1
						5810 Ground	1
						5840 Stairs, steps	1

Table 5.1 (Cont.)

Industry		Nature Of Injury Or Illness				Source Of Injury Or Illness	
Rank	Code	Definition	Deaths	Rate	Code	Definition	Deaths
NA	799	Miscellaneous Recreational Services (Cont.)				6500 Ice, snow	1
						8800 Miscellaneous	1
						9800 Nonclassifiable	1
NA	769	Miscellaneous Repair Shops	18	NA	400 Multiple injuries	5 4300 Mineral items, nonmetallic	3
					991 Heart conditions	3 5620 Highway vehicles	3
					120 Burn (heat)	2 1700 Flame, fire, smoke	2
					210 Fracture	2 999 Chemicals and compounds	1
					110 Asphyxia, strangulation	1 1520 Switches, circuit breakers	1
					170 Cut, laceration, puncture	1 4115 Beams, bars	1
					200 Electric shock	1 4120 Bullets	1
					283 Asbestosis	1 4140 Pipe	1
					990 Occupational disease	1 4199 Metal items	1
					995 Other injury, n.e.c.	1 5610 Aircraft	1
						5810 Ground	1
						6010 Heart failure	1
						8800 Miscellaneous	1
NA	869	Membership Organizations, n.e.c.	12	NA	210 Fracture	3 5620 Highway vehicles	5
					271 Toxic systemic poisoning	2 935 Carbon monoxide	2
					400 Multiple injuries	2 6010 Heart failure	2
					991 Heart conditions	2 1700 Flame, fire, smoke	1
					110 Asphyxia, strangulation	1 3050 Agricultural machines	1
					120 Burn (heat)	1 4300 Mineral items, nonmetallic	1
					310 Sprains, strains	1	
NA	452	Noncertified Air Transport	10	NA	400 Multiple injuries	6 5610 Aircraft	8
					120 Burn (heat)	2 1700 Flame, fire, smoke	1
					210 Fracture	2 5620 Highway vehicles	1
NA	18	Horticultural Specialties	9	NA	110 Asphyxia, strangulation	2 2245 Knife	2
					170 Cut, laceration, puncture	2 5620 Highway vehicles	2
					210 Fracture	2 2000 Glass items	1
					400 Multiple injuries	1 2910 Water	1
					510 Cerebrovascular conditions	1 5638 Powered towing vehicles	1
					995 Other injury, n.e.c.	1 5899 Working surfaces	1
						6010 Heart failure	1
NA	106	Ferroalloy Ores, except Vanadium	9	NA	400 Multiple injuries	4 3350 Mining machinery	3
					110 Asphyxia, strangulation	2 2910 Water	2
					120 Burn (heat)	2 4200 Mineral items, metallic	1
					210 Fracture	1 4300 Mineral items, nonmetallic	1

Table 5.1 (Cont.)

<i>Industry</i>		<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>		
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>
NA	106 Ferroalloy Ores, except Vanadium (Cont.)					5810 Ground	1
						8800 Miscellaneous	1
NA	21 Livestock, except Dairy, etc.	8	NA	400 Multiple injuries	4	5620 Highway vehicles	3
				110 Asphyxia, strangulation	1	1820 Grains and grain products	1
				170 Cut, laceration, puncture	1	4120 Bullets	1
				200 Electric shock	1	5638 Powered towing vehicles	1
				210 Fracture	1	5810 Ground	1
						8800 Miscellaneous	1
NA	108 Metal Mining Services	8	NA	400 Multiple injuries	6	5610 Aircraft	5
				160 Contusion, crushing	1	4110 Automobile parts (metal)	1
				210 Fracture	1	5620 Highway vehicles	1
						5801 Floor	1
NA	559 Automotive Dealers, n.e.c.	8	NA	400 Multiple injuries	5	5610 Aircraft	6
				999 Nonclassifiable	2	5620 Highway vehicles	1
				210 Fracture	1	5800 Working surfaces	1
NA	13 Field Crops, except Cash Grains	6	NA	400 Multiple injuries	2	5620 Highway vehicles	3
				110 Asphyxia, strangulation	1	1700 Flame, fire, smoke	1
				120 Burn (heat)	1	2910 Water	1
				160 Contusion, crushing	1	5801 Floor	1
				210 Fracture	1		
NA	17 Fruits and Tree Nuts	6	NA	110 Asphyxia, strangulation	1	1700 Flame, fire, smoke	2
				160 Contusion, crushing	1	2620 Elevators	1
				210 Fracture	1	3850 Shears, slitters, slicers	1
				400 Multiple injuries	1	5620 Highway vehicles	1
				570 Respiratory conditions	1	5638 Powered towing vehicles	1
				999 Nonclassifiable	1		
NA	85 Forestry Services	6	NA	400 Multiple injuries	4	5610 Aircraft	3
				110 Asphyxia, strangulation	1	5620 Highway vehicles	3
				999 Nonclassifiable	1		
NA	881 Private Households	6	NA	400 Multiple injuries	2	5620 Highway vehicles	3
				991 Heart conditions	2	2290 Shovel, spade	1
				310 Sprains, strains	1	5631 Handtrucks, dollies, etc.	1
				999 Nonclassifiable	1	5810 Ground	1
NA	593 Used Merchandise Stores	5	NA	991 Heart conditions	2	5620 Highway vehicles	2
				170 Cut, laceration, puncture	1	1999 Furniture, fixtures	1
				210 Fracture	1	4120 Bullets	1

Table 5.1 (Cont.)

<i>Industry</i>		<i>Nature Of Injury Or Illness</i>				<i>Source Of Injury Or Illness</i>	
<i>Rank</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code Definition</i>	<i>Deaths</i>	<i>Code Definition</i>	<i>Deaths</i>
NA	593 Used Merchandise Stores (Cont.)			999 Nonclassifiable	1	6010 Heart failure	1
NA	72 Crop Services	4	NA	999 Nonclassifiable	2	1599 Electrical apparatus	1
				200 Electric shock	1	5620 Highway vehicles	1
				400 Multiple injuries	1	5801 Floor	1
						9800 Nonclassifiable	1
NA	214 Tobacco Stemming, and Redrying	4	NA	210 Fracture	2	630 Boxes, crates, cartons	1
				170 Cut, laceration, puncture	1	2400 Heat	1
				240 Effects of heat exposure	1	4120 Bullets	1
						5801 Floor	1
NA	829 Schools and Educational Services	4	NA	999 Nonclassifiable	2	5610 Aircraft	3
				210 Fracture	1	5620 Highway vehicles	1
				400 Multiple injuries	1		
NA	75 Animal Services, except Veterinary	3	NA	400 Multiple injuries	2	201 Animals	1
				210 Fracture	1	2500 Heating equipment	1
						5620 Highway vehicles	1
NA	109 Miscellaneous Metal Ores	3	NA	110 Asphyxia, strangulation	2	930 Carbon dioxide	2
				551 Malignant tumor	1	5099 Radiating substances	1
NA	266 Building Paper and Board Mills	3	NA	210 Fracture	2	5620 Highway vehicles	1
				551 Malignant tumor	1	5801 Floor	1
						8800 Miscellaneous	1
NA	605 Banking Functions	3	NA	170 Cut, laceration, puncture	2	4120 Bullets	2
				210 Fracture	1	5620 Highway vehicles	1
NA	27 Animal Specialties	2	NA	110 Asphyxia, strangulation	1	201 Animals	1
				999 Nonclassifiable	1	2910 Water	1
NA	141 Dimension Stone	2	NA	210 Fracture	1	100 Abnormal Air Pressure	1
				400 Multiple injuries	1	3350 Mining machinery	1
NA	489 Communication Services, n.e.c.	2	NA	210 Fracture	2	5610 Aircraft	2
NA	497 Irrigation Systems	2	NA	400 Multiple injuries	1	799 Buildings and structures	1
				999 Nonclassifiable	1	5620 Highway vehicles	1
NA	628 Security, and Commodity Services	2	NA	110 Asphyxia, strangulation	1	2910 Water	1
				160 Contusion, crushing	1	5810 Ground	1
NA	679 Miscellaneous Investing	2	NA	400 Multiple injuries	1	3050 Agricultural machines	1
				991 Heart conditions	1	6010 Heart failure	1

Table 5.1 (Cont.)

<i>Industry</i>				<i>Nature Of Injury Or Illness</i>			<i>Source Of Injury Or Illness</i>			
<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Rate</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>	<i>Code</i>	<i>Definition</i>	<i>Deaths</i>
NA	729	Miscellaneous Personal Services	2	NA	170	Cut, laceration, puncture	1	2245	Knife	1
					991	Heart conditions	1	6010	Heart failure	1
NA	899	Services, n.e.c.	2	NA	400	Multiple injuries	2	5620	Highway vehicles	2
NA	105	Bauxite, Other Aluminum Ores	1	NA	400	Multiple injuries	1	5810	Ground	1
NA	442	Deep Sea Domestic Transport	1	NA	991	Heart conditions	1	5749	Wood items	1
NA	482	Telegraph Communication	1	NA	283	Asbestosis	1	4300	Mineral items, nonmetallic	1
NA	601	Federal Reserve Banks	1	NA	170	Cut, laceration, puncture	1	4120	Bullets	1
NA	623	Security, Commodity Exchanges	1	NA	991	Heart conditions	1	630	Boxes, crates, cartons	1
NA	735	News Syndicates	1	NA	274	Influenza, pneumonia, etc.	1	900	Chemicals	1
NA	809	Health and Allied Services	1	NA	271	Toxic systemic poisoning	1	935	Carbon monoxide	1
NA	841	Museums and Art Galleries	1	NA	991	Heart conditions	1	1900	Furniture, fixtures	1
NA	842	Offices of Dentists	1	NA	400	Multiple injuries	1	201	Animals	1
			4826					4826		

n.e.c. = not elsewhere classified

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Chapter 6

National Estimates and Causes of 5,498 Job-Related Deaths in 1979–81, 1983, 1985, 1986

NATIONAL ESTIMATES

The SDS data contain 5,498 deaths from 11 states from 1979-81, 1983, 1985, and 1986. This represents approximately 916.3 deaths per year. Given that, on average, the 7 to 11 states contributed 16.36 percent of U.S. employment, the annual estimate is 5,601 ($916.3 / .1636 = 5,601$). If 89 percent were injury deaths and 11 percent were disease deaths, then approximately 4,985 people die from injuries and 616 die from diseases each year. This annual U.S. estimate of 5,601 for injury and disease deaths is likely to be low for several reasons. The most important reason, however, is the exclusive reliance on WC records. If (1) WC records catch 43 percent of all injury deaths,¹ and if (2) 11 percent of the SDS deaths are disease deaths, including 4 percent due to heart failure, then our estimate of national job-related *injury* deaths is 11,593 for the years 1979-86:

$$\frac{5,601 \times .89}{.43} = 11,593$$

This 11,593 estimate exceeds the NIOSH, NTOF 7,000 per year estimate but is close to the 12,000 National Safety Council (1992) estimate for *injury* deaths for the same years.

CAUSE OF DEATH

The SDS allows three entries relating to cause of death: nature, source, and type. In this chapter these causes of death are analyzed for 5,498 deaths from 1979-86 across 11 states.

Nature of Injury or Illness

Table 6.1 indicates the rankings for all 5,498 deaths, according to the nature of the death as defined by the American National Standards Institute (ANSI). These data include decedents in the SDS who, prior to death, worked either for a private employer or federal, state, or local government.

The first category, Multiple Injuries, accounts for roughly 24.5 percent of all deaths. The term is general and probably acts as a catch-all category for more than one injury.

The second category is Heart Conditions, which contributes roughly 21.1 percent of the deaths. This cause of death should not necessarily be interpreted as coronary heart disease (CHD) resulting from years in a stressful job.² The WC boards must be convinced that the heart condition was directly related to the job. As a result, these heart conditions should frequently be interpreted as heart failures resulting from a recent traumatic on-the-job experience. The autopsy, for example, would have indicated that the direct cause of the death was heart failure, even though the job-related event precipitating the failure could have been a vehicle crash injury, heat or smoke exposure, contact with an electric current, a fall, and so on.

But heart disease due to stress may more likely be compensable by WC boards today than in the 1980's. Many fatal heart attacks suffered by police and firefighters, for example, are compensated by the WC boards even if the attack occurred at home. One heart disease case, reported by Freedman (1990) but not included in the SDS, involved a man who was recently fired. His widow alleged that the firing caused stress and induced the heart attack. New York's highest court agreed and awarded her WC benefits.

In the public mind, job stress leading to heart disease is most frequently associated with executive and professional jobs. The scientific literature does not support this view, however. Most studies show that workers in low-paid manual jobs suffer the highest heart disease rates and executives and professionals suffer the least.³

Third in line is "Fractures." Fourth is "Cuts, lacerations, and punctures." Fifth is "Injuries and illnesses that could not be classified." "Asphyxia and strangulation" is in the sixth position, while "Contusion and crushing" is in position seven. "Electric shock" accounts for 3.4 percent of all deaths and is in position eight. "Heat burn" is in position nine and accounts for 3.1 percent of all deaths.

Ties are not broken in Table 6.1. If two or more categories contribute the same number of deaths, those categories receive the same rank. For example, in Table 6.1 three categories tied for rank 17: codes 153, 64, and 69.

The Nature of Death classification is especially useful in identifying occupational diseases apart from the problematic "heart conditions" category. "Silicosis and asbestosis" are the highest ranking diseases and account for 1.9 percent and 1.4 percent of all deaths. The actual number of deaths are 106 and

77. Consequently the annual estimates are then approximately 17.7 and 12.8 (106/6 and 77/6). Given that the states in the SDS on average contributed 16.36 percent of employment in the United States, our U.S. estimates for silicosis and asbestosis are then 108 and 78 ($17.7 / .1636$ and $12.8 / .1636$). NIOSH estimates published in *Health, United States, 1991* (p. 180) indicate roughly 170 annual silicosis deaths and 123 annual asbestosis deaths during 1979-86. Yet no assessments of WC undercounts for either silicosis or asbestosis have appeared in the literature. As we will see in Chapter 8, however, WC numbers may underestimate injury deaths by 57 percent. Given the expected WC undercount, the 108 and 78 annual estimates, therefore, appear remarkably consistent with the NIOSH data in *Health, United States, 1991*.

The same publication lists roughly 940 annual deaths due to coal miners' pneumoconiosis and 550 annual deaths due to mesothelioma. "Pneumoconiosis," "Other pneumoconioses," and "Pneumoconiosis with tuberculosis" account for 28, 7, and 4 deaths, for a total of 39 deaths in Table 6.1. If the same calculations are applied as above, the SDS or WC data here indicate only 39 annual pneumoconiosis deaths. This is obviously a gross underestimate, but it can be explained.

A significant portion of black lung benefits are paid through the federal Black Lung Disability Trust. The purpose of the Trust, established in 1972, was to "fill the gap in state WC coverage on coal miners."⁴ In 1987, 242,000 miners, widows, and dependents received \$904 million in annual Black Lung benefits.⁵ The Trust is paid for by a national tax on coal. Some WC boards, employers, employees, and physicians in the past have simply forwarded claims to the Trust. Consequently, most black lung cases are not included in the SDS. This is not now true in Pennsylvania, Kentucky, and West Virginia, however, where state WC boards pay death benefits for black lung. Survivors of family members dying from black lung in these three states may also receive payment from the Trust. The Trust benefits are reduced, however, in states where WC pays a death benefit. Most coal mined in the United States comes from these three states. But none of these are included in the SDS. However, two states included in the SDS--Colorado and Virginia--also have high mortality rates due to black lung.⁶ This striking undercount of pneumoconiosis in the SDS obviously has implications for the ranking in Tables 4.1 and 5.1. This is one of the drawbacks of the SDS data indicated in Chapters 1 and 8.

The SDS undercount of mesothelioma is also of concern. The undercount may in part be the result of coding error. The nature of the illness or injury that the SDS investigators adapted from the American National Standard Institute did not list mesothelioma as a possible cause of death. Mesothelioma is a form of cancer of the membranes that surround the lungs and line the chest cavity. Caused by exposure to asbestiform fibers, mesothelioma generally occurs 20 years after the onset of exposure. There were especially high mortality rates due to mesothelioma in three states included in the SDS--New York, Iowa, and Wisconsin.⁷

Since the SDS does not allow mesothelioma as a possible nature of death, a separate analysis was conducted on the nonclassifiable deaths in the nature list in Table 6.1. Byssinosis (brown lung) was also likely to be undercounted in these SDS/WC data. Industries that contributed significant amounts to the nonclassifiable deaths included mining, mineral processing, heating equipment, electrical housewares, industrial furnace manufacturing, shipbuilding, and construction. Each of these industries are among those suspected of exposing workers to asbestiform fiber.⁸

According to Richard Guarasci (1985), roughly only 2 percent of workers' compensation cases were contested by employers in North and South Carolina during the late 1970s. However, 80 percent of the North Carolina and 100 percent of the South Carolina byssinosis cases were contested by the textile companies. Excessive exposure to cotton dust causes byssinosis. Workers' Compensation claims boards in the Carolinas resisted byssinosis disability claims until 1983. Yet byssinosis had been a compensable disease in Britain since World War II. Moreover, by 1983, 80 percent of U.S. textile plants had already installed OSHA-recommended engineering controls to reduce worker's exposure to cotton dust.⁹

OSHA is also partly to blame for some job-related deaths because of limp fines and few inspections. From 1975 to 1983, OSHA inspectors found over 90 percent of textile mills in the Carolinas had dust in the air of factories which exceeded OSHA standards. Even so, the average penalty levied by the Carolinas' Occupational Safety and Health Administrations due to noncompliance was \$50.¹⁰

The Nature classifications are also useful in indicating the overall contribution of a disease versus the injuries to total job-related deaths in the SDS data. Table 6.1 sums together all of the disease categories--silicosis (106 deaths), asbestosis (77 deaths), cerebrovascular conditions (49), pneumoconiosis (39), influenza (32), tumor (21), respiratory conditions (10), occupational disease n.e.c. (8), hepatitis (7), blood disease (4), infections (4), mental disorders (3), tuberculosis (3), inflammations of joints (3), gastrointestinal (1), siderosis (1), and neoplasm (1)--to show 337 deaths can be classified as disease deaths, excluding heart disease deaths. One estimate of the contribution of disease is then 6.13 percent (339/5,498). But this excludes the possible mesotheliomas in the nonclassifiable category. Assuming one-third of the nonclassifiable are mesotheliomas, 106 additional deaths bring the total deaths to 443 or 8.1 percent (443 / 5,498). Finally, assuming an additional three percent for heart disease, would bring our disease deaths to 11.1 percent or 610 deaths.

Poisonings contributed 64 deaths, for a 1.2 percent contribution.

The 6-8 percent contribution of occupational disease--excluding the bulk of black lung diseases and heart diseases--to total job-related deaths is remarkably consistent with other government reports. Cotter and Macon (1987) estimated 8.8 percent of deaths due to disease in 1985, while Macon (1984) estimated roughly 8.3 percent of deaths due to disease in 1982.

The government estimates that black lung, mesothelioma, asbestosis, and silicosis (but not heart disease) caused roughly 1,700 annual deaths in the early 1980s.¹¹ Assuming 11,593 injury deaths per year, the *Health, United States, 1991* estimates suggest roughly 13 percent of all occupational deaths can be attributed to disease (excluding heart disease).

All of these government data likely underestimate occupational illnesses, however. Hilaski (1981) and Markowitz et al. (1989) suggest that five to eight times as many people die from occupational disease as from occupational injuries. See Chapter 8.

Source of Injury or Illness

Table 6.2 presents a ranking of 5,498 deaths by source, as defined by the American National Standards Institute (ANSI). The ANSI code appears as the second column. Leading the list are highway vehicles, with 23 percent of all deaths. Prior BLS reports, using the data from BLS surveys of 280,000 firms, indicate highway vehicles caused roughly 27 to 29 percent of all deaths.¹² This 23 percent estimate appears low but, in fact, can be easily reconciled with prior BLS reports. The ANSI codes list five vehicle categories. The BLS reports allow only two vehicle categories. It is likely that some of the ANSI categories such as "Powered towing vehicles" (rank 23), "Vehicles" (rank 35, tie), "Vehicles" (rank 48, tie), or "Industrial vehicles" (rank 51) are classified as highway vehicles in the BLS reports from 280,000 firms.

Heart failure ranks second and accounts for 6.4 percent of the deaths. The BLS reports from 280,000 firms attribute heart failure to 9-10 percent of deaths. The discrepancy may again be due to the much greater number of possible categories in the ANSI Source list compared to the BLS list, as well as the prominence of "Nonclassifiable" (rank 4) and "Miscellaneous" (rank 11) on the list in Table 6.2.

A surprising category ranks third: bullets. Earlier BLS reports¹³ ignore any category for assault or murder. Later BLS reports¹⁴ include a category for assault. The later BLS reports estimate that assaults contributed 4 percent. Table 6.2 suggests that bullets alone account for 5.6 percent. Moreover, if "Another person" (rank 18) and "Knife" (rank 20) are added to bullets, then over 7.3 percent of deaths may be attributed to assault. The 7.3 percent puts "Assault" in second position, ahead of "Heart failure." The SDS data thus suggest that the BLS estimates from 280,000 firms may severely underestimate the number of job-related murders. Researchers investigating alternative sources of data, including the new U.S. Census of Fatal Occupational Injuries (CFOI), came to the same conclusion:¹⁵ the BLS underestimated the number of job-related murders from 1975 through 1990.

"Bullets" may also represent suicide. A recent case (not in the SDS) involved a man who had fractured three vertebrae in a work-related accident. He

became despondent and distressed and experienced considerable chronic pain. He could not find work. Two years after the injury he committed suicide. His widow was granted WC death benefits.¹⁶

After Nonclassifiable, the next in line are "Ground" and "Floor", together contributing roughly 6 percent. "Ground" and "Floor" suggest a fall occurred. Combining "Ground" and "Floor" with "Stairs" (rank 28), we obtain a 6.5 percent contribution. In contrast, the BLS estimates 9-12 percent of deaths due to falls.

"Aircraft" is in position eight and contributes 2.7 percent of deaths. The 1979-88 BLS estimates are 4-5 percent. "Flame, fire and smoke" contribute 2.2 percent of deaths. The BLS estimates are 2-4 percent.

The remarkable similarity between the list in Table 6.2 and those of the BLS for "Highway vehicle," "Heart failure," "Bullets," "Aircraft," and "Flame" lends credibility to the SDS data.

The lion's share of ANSI categories are ignored in the BLS reports. A number of interesting findings pertaining to the unique ANSI categories emerge from Table 6.2. "Animals" (rank 42) contribute 11 deaths; "Insects" (rank 48) contribute five deaths; and "Other live animals and birds" contribute one death. "Elevators" are responsible for 18 deaths. People in desk jobs are not immune from injury. "Desks" (rank 43) killed ten people.

Type of Accident or Exposure

Table 6.3 provides information on the last ANSI set of categories: type of accident or exposure. The categories in Table 6.3 are again much more narrow than those in the BLS reports from the 280,000 firms or the more recent CFOI reports.¹⁷ Nevertheless, a number of similarities are evident. "Electrocutions" contribute 6-9 percent of the BLS deaths. In Table 6.3, "Contact with electric current" contributes 3.6 percent. "Explosions" account for 2-4 percent of BLS deaths and 1.5 percent of SDS deaths. "Struck by," "Motor vehicle," and "Fall" categories contribute sizeable shares of deaths on both the SDS and BLS lists.

A number of interesting findings emerge from Table 6.3. "Noise" (rank 49) killed three people. It is not clear how noise caused the death. It may have been a contributing factor in keeping the worker from hearing that danger was imminent. Nevertheless, there is increasing evidence that sustained levels of noise can raise blood pressure.¹⁸

"Overexertion" (ranks 7, 23, 24, 45) was responsible for 374 deaths.

"Inhalation of radiation or caustics" is in position two and accounts for 8.4 percent of the deaths. This is unexpected. The closest category in the BLS reports is "Gas inhalation," with 2-3 percent of the deaths. This suggests an area of further research. The BLS may be underestimating deaths due to inhalation of toxic substances. This could be related to the mesothelioma misclassification since it is likely that a death certificate would indicate inhalation as the type of

exposure in a mesothelioma death. This 8.4 percent statistic could represent an alternative estimate of the number of disease deaths in the SDS. Mesothelioma, asbestosis, silicosis, and black lung all result from inhaling substances.

COMPARISON TO THE NEW CFOI DATA

The BLS began collecting new data in 1990--the Census of Fatal Occupational Injuries (CFOI).¹⁹ Yet the CFOI ignores illnesses and occupational disease. The general patterns in the earlier BLS reports from 1982 and 1985 are found again in the CFOI data from 1990, 1991. Highway vehicles contributed to 18 percent of deaths, nonhighway vehicles contributed 6 percent, aircraft 5 percent, falls 11 percent, contact with electric current 6 percent, explosion 3 percent, and struck by 17 percent. The one unusual finding pertains to homicide. In the 1990s, homicide contributes to 14 percent of deaths, up significantly from the earlier BLS reports and these SDS data estimates from the 1980s. One reason for the higher homicide percentage could be due to the CFOI excluding diseases. All injury contributions would, therefore, appear bigger in the CFOI. But it could also be that the earlier BLS reports and the SDS data used here underestimate the number of murders.

The CFOI is not directly comparable to the earlier BLS reports on the 280,000 firms or the SDS data reported here for three reasons. First, the CFOI data apply to the 1990s. Second, only traumatic (injury) deaths are reported in the CFOI, whereas the BLS reports from 280,000 firms and the SDS data represent some illnesses. Third, the CFOI goes beyond SDS and WC data as well as the data from the 280,000 firms to collect death records from death certificates, state coroner reports, news media, toxicology reports, autopsy, and state motor vehicle reports. The CFOI information suggests that WC death claims constituted only roughly 43-46 percent of all traumatic deaths for 31 states in 1991.²⁰

SUMMARY TABLE 6.4

Tables 6.1-6.3 present detailed information on the cause of death. Table 6.4 presents information in broader and, perhaps, more informative categories. The rankings and percentages are based upon the author's judgment since considerable confusion could occur in attempting to parcel out multiple injuries, nonclassifiable, fractures, cuts, and so on. The list in Table 6.4 is based on the SDS data; hence, for example, black lung and mesothelioma are inadequately represented.

Because of the disease undercount, the most serious error in Table 6.4 is in rank 3: "All diseases including heart."

NOTES

1. See Cimini and Becker, 1993.
2. See Karasek and Theorell, 1990.
3. See Karasek and Theorell, 1990, and Leigh, 1991.
4. See Freeman, 1990, p. 30.
5. See U.S. Department of Health and Human Services, 1990.
6. See *National Center for Health Statistics, 1988*, p. 25.
7. See *National Center for Health Statistics, 1988*, p. 23.
8. See *National Center for Health Statistics, 1988*.
9. See Guarasci, 1985.
10. See Guarasci, 1985.
11. See *National Center for Health Statistics, 1991*.
12. See Cotter and Macon, 1987, and Macon, 1984.
13. See Macon, 1984.
14. See Cotter and Macon, 1987.
15. See Kraus, 1987; Davis, 1987; and Toscano and Windau, 1992.
16. See Minter, 1993b.
17. See Cimini and Becker, 1993.
18. See Talbott, 1988, and Mathews et al., 1987.
19. See Toscano and Windau, 1992.
20. See Cimini and Becker, 1993, and Toscano and Windau, 1992.

Table 6.1

Job Deaths by Nature of Illness or Injury
Ranked in Descending Order by Total Deaths
Shared Ranks are Used

<i>Rank</i>	<i>Code</i>	<i>Nature Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
1	400	Multiple injuries	1349	24.54%
2	991	Heart conditions	1159	21.08%
3	210	Fracture	777	14.13%
4	170	Cut, laceration, puncture	436	7.93%
5	999	Non classifiable	317	5.77%
6	110	Asphyxia, strangulation	209	3.80%
7	160	Contusion, crushing	207	3.77%
8	200	Electric shock	187	3.40%
9	120	Burn (heat)	169	3.07%
10	286	Silicosis	106	1.93%
11	283	Asbestosis	77	1.40%
12	995	Other injury, n.e.c.	62	1.13%
13	271	Toxic systemic poisoning	59	1.07%
14	140	Concussion	52	0.95%
15	510	Cerebrovascular conditions	49	0.89%
16	310	Sprains, strains	45	0.82%
17	274	Influenza, pneumonia, etc.	32	0.58%
18	280	Pneumoconiosis	28	0.51%
19	572	Influenza, pneumonia	25	0.45%
20	551	Malignant tumor	21	0.38%
21	190	Dislocation	19	0.35%
22	240	Effects of heat exposure	15	0.27%
23	100	Amputation or enucleation	12	0.22%
24	570	Respiratory conditions	10	0.18%
25	250	Hernia, rupture	9	0.16%
26	990	Occupational disease	8	0.15%
27	130	Burn (chemical)	7	0.13%
27	287	Other pneumoconioses	7	0.13%
27	330	Hepatitis	7	0.13%
28	270	Systemic poisoning	5	0.09%
29	272	Blood disease	4	0.07%
29	289	Pneumoconiosis with TB	4	0.07%
30	540	Mental disorders	3	0.05%
30	580	Ill-defined conditions	3	0.05%
30	157	Tuberculosis	3	0.05%
30	159	Other infective disease	3	0.05%
31	260	Inflammation of joints	2	0.04%
31	220	Effects of cold exposure	2	0.04%
31	300	Scratches, abrasions	2	0.04%
32	150	Infective disease	1	0.02%
32	276	Gastro-intestinal disease	1	0.02%
32	279	Toxic effects, one system	1	0.02%
32	285	Siderosis	1	0.02%

Table 6.1 (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Nature Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
32	520	Medical care complications	1	0.02%
32	550	Neoplasm, tumor	1	0.02%
32	561	Central nervous system	1	0.02%
TOTAL			5498	100.00%

Table 6.2

Job Deaths by Source of Injury or Illness
Ranked in Descending Order by total Deaths
Shared Ranks are Used

<i>Rank</i>	<i>Code</i>	<i>Source Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
1	5620	Highway vehicles	1246	22.66%
2	6010	Heart failure	354	6.44%
3	4120	Bullets	308	5.60%
4	9800	Non classifiable	283	5.15%
5	4300	Mineral items, nonmetallic	207	3.77%
6	5810	Ground	181	3.29%
7	5801	Floor	151	2.75%
8	5610	Aircraft	149	2.71%
9	0630	Boxes, crates, cartons	131	2.38%
10	1700	Flame, fire, smoke	123	2.24%
11	8800	Miscellaneous	112	2.04%
12	3300	Earth moving machines	87	1.58%
12	4700	Plants, trees, vegetation	87	1.58%
13	1515	Conductors	81	1.47%
14	0999	Chemicals and compounds	67	1.22%
14	2910	Water	67	1.22%
15	5635	Forklifts, stackers, etc.	65	1.18%
16	5800	Working surfaces	63	1.15%
17	0699	Containers	58	1.05%
18	2610	Cranes, derricks	54	0.98%
18	6020	Another person	54	0.98%
19	4600	Particles (unidentified)	46	0.84%
20	4199	Metal items	44	0.80%
21	5710	Logs	43	0.78%
21	0660	Bundles, bales	43	0.78%
22	2245	Knife	41	0.75%
23	5638	Powered towing vehicles	38	0.69%
24	1599	Electrical apparatus	35	0.64%
24	2290	Shovel, spade	35	0.64%
25	5640	Rail vehicles	34	0.62%
25	3999	Machines	34	0.62%
26	4140	Pipe	31	0.56%
27	5200	Silica	30	0.55%
27	5631	Hand trucks, dollies, etc.	30	0.55%
28	5899	Working surfaces	27	0.49%
28	5840	Stairs, steps	27	0.49%
29	0665	Reels, rolls	26	0.47%
29	0400	Bodily motion	26	0.47%
30	5720	Lumber	24	0.44%
31	0755	Walls, fences	23	0.42%
32	3050	Agricultural machines	22	0.40%
33	0900	Chemicals	21	0.38%
33	0935	Carbon monoxide	21	0.38%
33	1999	Furniture, fixtures	21	0.38%

Table 6.2 (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Source Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
33	4115	Beams, bars	21	0.38%
34	0601	Barrels, kegs, drums	20	0.36%
35	0705	Doors, gates	18	0.33%
35	5600	Vehicles	18	0.33%
35	2620	Elevators	18	0.33%
36	0530	Pressure lines	17	0.31%
36	5749	Wood items	17	0.31%
37	1350	Powered conveyors	16	0.29%
37	5845	Street, road	16	0.29%
37	3000	Machines	16	0.29%
38	0799	Buildings and structures	15	0.27%
38	0950	Halogenated compounds	15	0.27%
38	2700	Infectious parasites	15	0.27%
39	2400	Heat	14	0.25%
40	1820	Grains and grain products	13	0.24%
40	6210	Tires	13	0.24%
41	0670	Tanks, bins, etc.	12	0.22%
41	1140	Hydrocarbon gases	12	0.22%
41	1500	Electric apparatus	12	0.22%
41	2299	Hand tools, not powered	12	0.22%
41	2500	Heating equipment	12	0.22%
42	1520	Switches, circuit breakers	11	0.20%
42	3350	Mining machinery	11	0.20%
42	4110	Automobile parts (metal)	11	0.20%
42	0201	Animals	11	0.20%
43	1840	Meats and meat products	10	0.18%
43	1930	Desks	10	0.18%
43	3250	Drilling, turning machines	10	0.18%
43	3750	Saws	10	0.18%
43	5730	Skids, pallets	10	0.18%
44	0701	Buildings	9	0.16%
44	1501	Motors	9	0.16%
44	4500	Paper and pulp items	9	0.16%
45	1510	Transformers, converters	8	0.15%
45	5400	Steam	8	0.15%
45	5830	Sidewalks, paths, walkways	8	0.15%
45	3600	Presses (not printing)	8	0.15%
46	0600	Boxes, containers, packages	7	0.13%
46	0740	Scaffolds, staging, etc.	7	0.13%
46	0954	Carbon monoxide	7	0.13%
46	1910	Chairs, benches, etc.	7	0.13%
46	1970	Tables	7	0.13%
46	2200	Hand tools, not powered	7	0.13%
46	2699	Hoisting apparatus	7	0.13%
46	3200	Crushing machines	7	0.13%
46	5820	Roofs	7	0.13%
47	0605	Bags	6	0.11%
47	0901	Acids	6	0.11%
47	0965	Glue	6	0.11%

Table 6.2 (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Source Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
47	1900	Furniture, fixtures	6	0.11%
47	2320	Hammer, tamper	6	0.11%
47	3150	Forging, welding machines	6	0.11%
47	3400	Office machines	6	0.11%
47	4200	Mineral items, metallic	6	0.11%
47	5700	Wood items	6	0.11%
47	1901	Cabinets, bookcases, etc.	6	0.11%
47	2000	Glass items	6	0.11%
48	0250	Insects	5	0.09%
48	0801	Brick	5	0.09%
48	1199	Coal & petroleum products	5	0.09%
48	2230	Hammer, sledge, mallet	5	0.09%
48	2295	Wrench	5	0.09%
48	2355	Saw	5	0.09%
48	4130	Molten metal	5	0.09%
48	4930	Pumps	5	0.09%
48	5300	Scrap, debris, waste	5	0.09%
48	5699	Vehicles	5	0.09%
48	2399	Hand tools, powered	5	0.09%
48	3100	Buffers, sanders, grinders	5	0.09%
49	0501	Boilers	4	0.07%
49	0750	Towers, poles, etc.	4	0.07%
49	1120	Crude, fuel oil	4	0.07%
49	1130	Liquid hydrocarbons	4	0.07%
49	3850	Shears, slitters, slicers	4	0.07%
49	4020	Chains, ropes, cables	4	0.07%
49	5500	Textile items	4	0.07%
49	1200	Cold	4	0.07%
49	1300	Conveyors	4	0.07%
49	4125	Molds	4	0.07%
49	4800	Plastic items	4	0.07%
50	0599	Pressure vessels	3	0.05%
50	0910	Alkalies	3	0.05%
50	1099	Apparel	3	0.05%
50	1950	Floor coverings	3	0.05%
50	2270	Rope, chain	3	0.05%
50	2625	Hoists	3	0.05%
50	2800	Ladders	3	0.05%
50	2830	Movable ladders	3	0.05%
50	3001	Agitators, mixers, etc.	3	0.05%
50	4000	Mechanical apparatus	3	0.05%
50	5825	Runways, platforms	3	0.05%
50	6100	Athletic equipment	3	0.05%
50	6500	Ice, snow	3	0.05%
51	0100	Abnormal air pressure	2	0.04%
51	0610	Pots and pans	2	0.04%
51	0615	Cans	2	0.04%
51	0700	Buildings and structures	2	0.04%
51	0708	Windows, window frames	2	0.04%

Table 6.2 (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Source Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
51	0710	Bridges	2	0.04%
51	0820	Drain tile, sewer pipe, etc.	2	0.04%
51	0930	Carbon dioxide	2	0.04%
51	0985	Metal, n.e.c.	2	0.04%
51	0987	Paint	2	0.04%
51	0992	Solvents, n.e.c.	2	0.04%
51	1101	Coal	2	0.04%
51	1870	Vegetable products	2	0.04%
51	2285	Screwdriver	2	0.04%
51	2300	Hand tools, powered	2	0.04%
51	2315	Drill	2	0.04%
51	2899	Ladders	2	0.04%
51	2900	Liquids	2	0.04%
51	2999	Other liquids	2	0.04%
51	4150	Metal parts, exc. auto	2	0.04%
51	4160	Metal binders	2	0.04%
51	5070	Arc-welding equipment	2	0.04%
51	5099	Radiating substances	2	0.04%
51	5660	Water vehicles	2	0.04%
51	1960	Lighting equipment	2	0.04%
51	3450	Packaging machines	2	0.04%
51	4135	Nails, spikes, etc.	2	0.04%
51	5630	Industrial vehicles	2	0.04%
52	0200	Live animals, birds, etc.	1	0.02%
52	0301	Bones	1	0.02%
52	0510	Pressurized containers	1	0.02%
52	0899	Ceramic items	1	0.02%
52	0905	Alcohols	1	0.02%
52	0915	Aromatic compounds	1	0.02%
52	0940	Carbon tetrachloride	1	0.02%
52	0945	Cyanide, cyanogen compounds	1	0.02%
52	0955	Metallic compounds	1	0.02%
52	0975	Hydrogen sulfide	1	0.02%
52	0988	Plastics	1	0.02%
52	1001	Boots, shoes, etc.	1	0.02%
52	1170	Manufactured gases	1	0.02%
52	1180	Naphtha solvents	1	0.02%
52	1190	Asphalts and road oils	1	0.02%
52	1400	Drugs and medicines	1	0.02%
52	2215	Crowbar, pry bar	1	0.02%
52	2260	Pliers, tongs	1	0.02%
52	2275	Saw	1	0.02%
52	2280	Scissors, shears	1	0.02%
52	2360	Screwdriver, bolt setter	1	0.02%
52	2370	Welding tools	1	0.02%
52	2600	Hoisting apparatus	1	0.02%
52	2641	Air hoist	1	0.02%
52	2650	Jacks	1	0.02%
52	3550	Planers, shapers, molders	1	0.02%

Table 6.2 (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Source Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
52	3650	Printing machines	1	0.02%
52	3700	Rolls	1	0.02%
52	3950	Weaving, spinning machines	1	0.02%
52	4030	Drums, pulleys, sheaves	1	0.02%
52	4100	Metal items	1	0.02%
52	4155	Metal fasteners	1	0.02%
52	4165	Metal chips	1	0.02%
52	5000	Radiating substances	1	0.02%
52	5080	X-ray equipment	1	0.02%
52	6200	Rubber products	1	0.02%
52	0320	Fur, hair, wool, etc.	1	0.02%
52	0946	Cosmetics	1	0.02%
52	1890	Food products	1	0.02%
52	2305	Buffer, polisher, waxer	1	0.02%
52	5601	Animal drawn vehicles	1	0.02%
52	1920	Counters, benches, etc.	1	0.02%
			=====	=====
		TOTAL	5498	100.00%

Table 6.3

**Job Deaths by Type of Accident or Exposure
Ranked in Descending Order by Total Deaths
Shared Ranks are Used**

<i>Rank</i>	<i>Code</i>	<i>Type Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
1	029	Struck by, n.e.c.	527	9.59%
2	181	Contact with radiation or caustics, by inhalation	459	8.35%
3	899	Accident type, n.e.c.	414	7.53%
4	123	Overexertion by wielding, holding, carrying objects	377	6.86%
5	022	Struck by flying object	318	5.78%
6	021	Struck by falling object	279	5.07%
7	121	Overexertion by lifting objects	244	4.44%
8	300	Motor vehicle accident, uns.	223	4.06%
9	130	Contact with electric current	197	3.58%
10	999	Non classifiable	167	3.04%
11	039	Fall to lower level, n.e.c.	165	3.00%
12	331	Motor vehicle accident, non collision, overturned	145	2.64%
13	201	Aircraft accident	136	2.47%
14	311	Motor vehicle accident, both in motion, oncoming	127	2.31%
15	332	Motor vehicle accident, non collision, ran off roadway	118	2.15%
16	153	Contact with temp. extremes, hot objects	106	1.93%
17	064	Caught in or under collapsing materials	97	1.76%
17	069	Caught in, under, between, n.e.c.	97	1.76%
17	310	Motor vehicle accident, both in motion, uns.	97	1.76%
18	062	Caught between moving and stationary objects	84	1.53%
19	500	Explosions, uns.	81	1.47%
20	322	Motor vehicle accident, standing vehicle on side of road	77	1.40%
21	051	Fall onto walkway, etc.	75	1.36%
22	031	Fall from scaffold, etc.	74	1.35%
23	129	Overexertion, n.e.c.	65	1.18%
24	122	Overexertion by pulling or pushing objects	58	1.05%
25	032	Fall from ladder	55	1.00%
25	034	Fall from vehicle	55	1.00%
26	321	Motor vehicle accident, stationary object in roadway	50	0.91%
27	313	Motor vehicle accident, vehicles moving in intersection	49	0.89%
28	036	Fall into shaft, etc.	44	0.80%
29	312	Motor vehicle accident, both in motion, same direction	38	0.69%
30	011	Struck against stationary object	34	0.62%
31	183	Contact with radiation or caustics, by absorption	31	0.56%
32	020	Struck by, uns.	27	0.49%
33	100	Bodily reaction, uns.	24	0.44%
34	035	Fall on stairs	22	0.40%
35	323	Motor vehicle accident, struck while standing in roadway	20	0.36%
36	338	Motor vehicle accident, other non collision	19	0.35%
36	330	Motor vehicle accident, non collision, uns.	19	0.35%
37	012	Struck against moving object	18	0.33%
38	061	Caught in running or meshing objects	17	0.31%
38	320	Motor vehicle accident, stationary object, uns.	17	0.31%

Table 6.3 (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Type Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
39	189	Contact with radiation or caustics, n.e.c.	15	0.27%
40	151	Contact with temp. extremes, general heat	14	0.25%
41	052	Fall onto or against objects	13	0.24%
42	030	Fall from elevation, uns.	11	0.20%
43	060	Caught in, under, between, uns.	10	0.18%
44	010	Struck against, uns.	9	0.16%
44	063	Caught between two or more moving objects	9	0.16%
45	120	Overexertion, uns.	7	0.13%
46	631	Non-highway vehicle accident, overturned vehicle	6	0.11%
46	182	Contact with radiation or caustics, by ingestion	6	0.11%
47	059	Fall on same level, n.e.c.	5	0.09%
48	085	Rubbed or abraded by repetition of pressure	4	0.07%
48	150	Contact with temp. extremes, uns.	4	0.07%
48	333	Motor vehicle accident, noncollision, sudden stop or start	4	0.07%
48	152	Contact with temp. extremes, general cold	4	0.07%
48	180	Contact with radiation or caustics, uns.	4	0.07%
48	200	Transportation accident, not motor vehicle, uns.	4	0.07%
49	101	Bodily reaction -- involuntary motions	3	0.05%
49	400	Exposure to noise, uns.	3	0.05%
50	033	Fall from piled materials	2	0.04%
50	050	Fall on same level, uns.	2	0.04%
50	081	Rubbed or abraded by leaning, kneeling, etc	2	0.04%
50	102	Bodily reaction -- voluntary motions	2	0.04%
50	324	Motor vehicle accident, struck while standing off roadway	2	0.04%
51	082	Rubbed or abraded by objects handled	1	0.02%
51	207	Streetcar or subway accident	1	0.02%
51	211	Train accident	1	0.02%
51	298	Transportation accident, not motor vehicle, n.e.c.	1	0.02%
51	610	Non-highway vehicle accident, collision, both in motion	1	0.02%
51	632	Non-highway vehicle accident, vehicle out of control	1	0.02%
51	635	Non-highway vehicle accident, fall from vehicle	1	0.02%
TOTAL			5498	100.00%

uns. = unspecified
n.e.c. = not elsewhere specified

Table 6.4

Estimates of Broad Causes of Deaths in the SDS

<i>Rank</i>	<i>Description</i>	<i>Percent of Deaths</i>
1	All vehicles and pedestrians	25.0
2	Struck by an object (not flying and not vehicle)	15.0
3	All diseases including heart	11.0
4	Homicide and suicide	9.0
5	Fall	7.0
6	Heart failure after traumatic event	4.0

Chapter 7

Women

Tables 4.1, 5.1, and 6.1-6.4 combine deaths for men and women. In this chapter, special attention is directed to women only. Women contributed 238 deaths in the SDS data from 1979-86.

OCCUPATIONS

Table 7.1 is similar in construction to the occupation death rates in Table 4.1. Because only 164 female deaths are recorded during the four (occupation) years, Table 7.1 is short. And because there are few deaths, the nature, and source columns from Table 4.1 do not appear in Table 7.1.

The most dangerous occupations for women are, in order, Airplane Pilot, Earth Driller, Crane Worker, Geologist, Therapy Assistant, Metal Molder, Mine Operative, Engineer nec, Airline Stewardess, Delivery Worker, Forester, Athlete, and Truck Driver. The *Airplane Pilot* category includes cropdusters, helicopter pilots, and corporate pilots as well as airline pilots.

These rankings appear reasonable, especially given their similarity to the rankings in Table 4.1. However, only 32 of 76 occupations in Table 7.1 register more than one death. Eight of the top ten occupations record only one death. These low numbers of female deaths--4 percent of the total--are consistent with other studies.¹ They are, nevertheless, disquieting in providing a convincing ranking of occupations in which women are at risk.

Estimates in Table 4.1 may ultimately prove to be more reliable for assessing the rankings of occupations for women. Even if women were assigned less hazardous duties than men, the relative rankings in Table 4.1 may still apply to women. For the relative rankings to be irrelevant, one must argue that assignment to hazardous duties not only varies between men and women but also across jobs. As attitudes change about what tasks women are capable of,

any disparity between male and female job-related death rates for a given occupation should disappear.

INDUSTRY

Given the relatively uninformative women-only occupation list, the construction of a women-only industry list was never attempted.

CAUSES OF DEATHS

Nature

Table 7.2 ranks the Nature category for women. "Multiple injuries" is in the first position, just as is true in Table 6.1. But unlike Table 6.1, "Fractures and cuts" are tied for second place. "Heart conditions" is in position four for women, but in position two for men and women (Table 6.1). In Table 7.2, "Silicosis" is responsible for one female death. One woman died of asbestosis. A much higher percentage of women (4.2%) than men (.8%) died of sprains and strains. Four women died of hepatitis.

Source

Table 7.3 presents the Source ranking for women. "Highway vehicles" heads the list. Although homicide is not an ANSI category unto itself, "Bullets" together with "Knives" represent 20 percent of female deaths. If "Persons other than the injured" are responsible for the death, then homicide deaths could well exceed 25 percent for women. Of interest is the high homicide rate for women found in other studies.² Roughly 4 percent died from heart failure, and 3 percent each from aircraft crashes and infectious parasites. Animals killed two women, and an animal-drawn vehicle killed another.

Type

Table 7.4 presents the rankings for the type of accident or exposure. These rankings are very similar for men and women: "Struck by nec," "Contact with caustics by inhalation," "Struck by flying object" (bullets), and "Motor vehicle accidents" are very high on both lists.

DISCUSSION

A total of 238 female deaths are recorded in the SDS. These are not a great number of deaths to analyze. Nevertheless, some conclusions may be tentatively advanced. (1) Homicide is responsible for a greater percentage of female than male deaths. (2) The relative importance of vehicle crashes, being struck by objects, heart failure, falls, and aircraft crashes appears to be about the same for women as for men.

Because of the few female deaths, two additional conclusions can be offered. (3) Table 7.1 is probably not reliable. Unless there is strong evidence to the contrary, the tables in Chapters 4 and 5, which rank occupations and industries by male and female deaths combined, probably apply equally to men and women. This conclusion may be more reasonable in the years ahead as traditional views of "inappropriate" tasks for women within jobs fade. In a separate analysis of SDS data from the late 1970s, Root and Daley (1980) drew the same conclusion. Within the same job, men and women suffer roughly the same injury rate. Recent data from postal employees disputes this view, however. Zwerling, Sprince, Ryan, and Jones (1993) found women had higher injury rates within the same job. (4) Additional research into job-related deaths among women is clearly warranted. This additional research should also consider the effects of job hazards and exposures on fetuses and women's reproductive capacity.

NOTES

1. See Baker et al., 1982; Bell et al., 1990; and Toscano and Windau, 1992.
2. See Davis et al., 1987.

Table 7.1

Female Job-Related Deaths within Occupations

<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Number of Deaths</i>	<i>Rate per 100,000</i>
1	163	Airplane pilots	1	204.52
2	614	Drillers, earth	1	187.64
3	424	Crane, derrick, hoist workers	1	51.52
4	51	Geologists	1	34.27
5	84	Therapy assistants	1	31.06
6	503	Molders, metal	1	28.55
7	640	Mine operatives, n.e.c.	1	25.26
8	780	Miscellaneous laborers	5	22.09
9	23	Engineers, n.e.c.	1	17.63
10	931	Airline stewardesses	4	14.91
11	705	Delivery and route workers	4	13.50
12	25	Foresters and conservationists	1	13.02
13	180	Athletes and kindred workers	2	12.95
14	715	Truck drivers	3	11.14
15	753	Freight and material handlers	3	10.72
16	751	Construction laborers	1	8.66
17	954	Welfare service aides	2	8.42
18	45	Chemists	1	6.57
19	623	Garage workers and gas station attendants	1	6.46
20	233	Sales managers, except retail trade	1	5.94
21	932	Attendants, recreation and amusement	2	5.36
22	194	Writers, artists, and entertainers, n.e.c.	1	5.27
23	266	Newsboys	1	4.98
24	950	Housekeepers, excluding private household	4	4.63
25	141	Adult education teachers	1	4.51
26	960	Crossing guards and bridge tenders	1	4.48
27	964	Policemen and detectives	1	3.84
28	645	Photographic process workers	1	3.60
29	4	Computer systems analysts	1	3.42
30	680	Welders and flame-cutters	1	3.41
31	656	Punch and stamping press operatives	1	3.20
32	762	Stock handlers	4	2.68
33	902	Cleaners and charwomen	6	2.61
34	65	Physicians, medical and osteopathic	1	2.54
35	231	Sales managers, retail trade	2	2.36
36	31	Lawyers	1	2.18
37	703	Bus drivers	2	2.14
38	611	Clothing ironers and pressers	1	2.06
39	162	Engineering and science technicians	1	1.94
40	982	Housekeepers, private household	1	1.77
41	962	Guards and watchmen	1	1.68
42	371	Secretaries, medical	1	1.63
43	913	Dishwashers	1	1.62
44	690	Machine operatives, miscellaneous	3	1.49
45	925	Nursing aides, orderlies, and attendants	9	1.41
46	922	Health aides, excluding nursing	2	1.34

Table 7.1 (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Definition</i>	<i>Number of Deaths</i>	<i>Rate per 100,000</i>
47	926	Practical nurses	3	1.15
48	910	Bartenders	1	1.08
49	220	Office managers, n.e.c.	2	1.06
50	921	Dental assistants	1	1.02
51	692	Machine operatives, not specified	1	.97
52	145	Teachers, except college and university, n.e.c.	1	.91
53	643	Packers and wrappers, excluding meat and produce	2	.90
54	202	Bank officers and financial managers	1	.84
55	610	Checkers, examiners, in manufacturing	2	.81
56	230	Restaurant, cafeteria, and bar managers	2	.77
57	822	Farm laborers, wage workers	1	.72
58	903	Janitors and sextons	2	.68
59	245	Managers and administrators, n.e.c.	4	.65
60	394	Miscellaneous clerical workers	2	.62
61	901	Chambermaids, excluding private household	1	.60
62	325	File clerks	1	.59
63	270	Real estate agents and brokers	1	.58
64	310	Cashiers	6	.55
65	602	Assemblers	3	.52
66	912	Cooks, excluding private households	3	.50
67	364	Receptionists	2	.44
68	100	Social workers	1	.50
69	915	Waiters	3	.37
70	301	Bank tellers	1	.31
71	942	Child care workers, excluding private household	1	.29
72	395	Not specified clerical workers	2	.26
73	372	Secretaries, n.e.c.	6	.25
74	305	Bookkeepers	2	.20
75	663	Sewers and stitchers	1	.14
76	75	Registered nurses	1	.06
		All others, no denominators	5	
			=====	
Number of deaths			164	

n.e.c. = not elsewhere classified

Table 7.2

Female Job Deaths by Nature of Illness or Injury
Ranked in Descending Order by Female Deaths
Shared Ranks are Used

<i>Rank</i>	<i>Code</i>	<i>Nature Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
1	400	Multiple injuries	57	23.95%
2	210	Fracture	33	13.87%
2	170	Cut, laceration, puncture	33	13.87%
3	999	Non classifiable	19	7.98%
4	991	Heart conditions	18	7.56%
5	110	Asphyxia, strangulation	13	5.46%
6	310	Sprains, strains	10	4.20%
7	160	Contusion, crushing	8	3.36%
7	120	Burn (heat)	8	3.36%
8	140	Concussion	6	2.52%
9	330	Hepatitis	4	1.68%
10	995	Other Injury; n.e.c.	3	1.26%
10	271	Toxic systemic poisoning	3	1.26%
10	510	Cerebrovascular conditions	3	1.26%
11	200	Electric shock	2	0.84%
11	274	Influenza, pneumonia, etc.	2	0.84%
11	572	Influenza, pneumonia	2	0.84%
11	190	Dislocation	2	0.84%
11	159	Other infective disease	2	0.84%
12	286	Silicosis	1	0.42%
12	283	Asbestosis	1	0.42%
12	551	Malignant tumor	1	0.42%
12	240	Effects of heat exposure	1	0.42%
12	250	Hernia, rupture	1	0.42%
12	990	Occupational disease	1	0.42%
12	289	Pneumoconiosis with TB	1	0.42%
12	157	Tuberculosis	1	0.42%
12	220	Effects of cold exposure	1	0.42%
12	300	Scratches, abrasions	1	0.42%
TOTAL			238	100.00%

n.e.c. = not elsewhere classified

Table 7.3

Female Job Deaths by Source of Injury or Illness
Ranked in Descending Order by Female Deaths
Shared Ranks are Used

<i>Rank</i>	<i>Code</i>	<i>Source Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
1	5620	Highway vehicles	66	27.73%
2	4120	Bullets	21	8.82%
3	5801	Floor	12	5.84%
4	9800	Non classifiable	11	4.62%
4	6020	Another person	11	4.62%
5	6010	Heart failure	10	4.20%
6	5610	Aircraft	8	3.36%
6	2700	Infectious parasites	8	3.36%
7	1700	Flame, fire, smoke	7	2.94%
8	5810	Ground	6	2.52%
8	8800	Miscellaneous	6	2.52%
8	2910	Water	6	2.52%
9	2245	Knife	5	2.10%
10	4300	Mineral items, nonmetallic	4	1.68%
10	0999	Chemicals and compounds	4	1.68%
11	0699	Containers	3	1.26%
11	5840	Stairs, steps	3	1.26%
11	0400	Bodily motion	3	1.26%
12	5800	Working surfaces	2	0.84%
12	0660	Bundles, bales	2	0.84%
12	5899	Working surfaces	2	0.84%
12	0201	Animals	2	0.84%
12	3600	Presses (not printing)	2	0.84%
13	0630	Boxes, crates, cartons	1	0.42%
13	1515	Conductors	1	0.42%
13	2610	Cranes, derricks	1	0.42%
13	4199	Metal items	1	0.42%
13	3999	Machines	1	0.42%
13	5631	Hand trucks, dollies, etc.	1	0.42%
13	0665	Reels, rolls	1	0.42%
13	0755	Walls, fences	1	0.42%
13	0935	Carbon monoxide	1	0.42%
13	1999	Furniture, fixtures	1	0.42%
13	4115	Beams, bars	1	0.42%
13	0601	Barrels, kegs, drums	1	0.42%
13	2620	Elevators	1	0.42%
13	3000	Machines	1	0.42%
13	0950	Halogenated compounds	1	0.42%
13	2400	Heat	1	0.42%
13	1901	Cabinets, bookcases, etc.	1	0.42%
13	2000	Glass items	1	0.42%
13	2399	Hand tools, powered	1	0.42%
13	3100	Buffers, sanders, grinders	1	0.42%
13	1200	Cold	1	0.42%

Table 7.3 (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Source Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
13	1300	Conveyors	1	0.42%
13	4125	Molds	1	0.42%
13	4800	Plastic items	1	0.42%
13	1960	Lighting equipment	1	0.42%
13	3450	Packaging machines	1	0.42%
13	4135	Nails, spikes, etc.	1	0.42%
13	5630	Industrial vehicles	1	0.42%
13	0320	Fur, hair, wool, etc.	1	0.42%
13	0946	Cosmetics	1	0.42%
13	1890	Food products	1	0.42%
13	2305	Buffer, polisher, waxer	1	0.42%
13	5601	Animal drawn vehicles	1	0.42%
13	1920	Counters, benches, etc.	1	0.42%
			=====	=====
		TOTAL	238	100.00%

Table 7.4

Female Job Deaths by Type of Accident or Exposure
Ranked in Descending Order by Total Deaths
Shared Ranks are Used

<i>Rank</i>	<i>Code</i>	<i>Type Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
1	029	Struck by, n.e.c.	30	12.61%
2	181	Contact with radiation or caustics, by inhalation	21	8.82%
3	022	Struck by flying object	20	8.40%
3	300	Motor vehicle accident, uns.	20	8.40%
4	899	Accident type, n.e.c.	16	6.72%
5	051	Fall onto walkway	14	5.88%
6	311	Motor vehicle accident, both in motion, oncoming	12	5.04%
7	999	Non classifiable	9	3.78%
8	121	Overexertion by lifting objects	8	3.36%
9	331	Motor vehicle accident, non collision, overturned	6	2.52%
9	201	Aircraft accident	6	2.52%
10	332	Motor vehicle accident, non collision, ran off roadway	5	2.10%
10	500	Explosions, uns.	5	2.10%
11	039	Fall to lower level, n.e.c.	4	1.68%
11	153	Contact with temperature extremes, hot objects	4	1.68%
11	310	Motor vehicle accident, both in motion, uns.	4	1.68%
11	322	Motor vehicle accident, standing vehicle on side of road	4	1.68%
11	183	Contact with radiation or caustics, by absorption	4	1.68%
12	123	Overexertion by welding, holding, carrying objects	3	1.26%
12	069	Caught in, under, between, n.e.c.	3	1.26%
12	011	Struck against stationary object	3	1.26%
12	100	Bodily reaction, uns.	3	1.26%
12	035	Fall on stairs	3	1.26%
13	021	Struck by falling object	2	0.84%
13	130	Contact with electric current	2	0.84%
13	064	Caught in or under collapsing materials	2	0.84%
13	031	Fall from scaffold, etc.	2	0.84%
13	122	Overexertion by pulling or pushing objects	2	0.84%
13	034	Fall from vehicle	2	0.84%
13	020	Struck by, uns.	2	0.84%
13	189	Contact with radiation or caustics, n.e.c.	2	0.84%
13	200	Transportation accident, not motor vehicle, uns.	2	0.84%
14	062	Caught between moving and stationary objects	1	0.42%
14	321	Motor vehicle accident, stationary object in roadway	1	0.42%
14	313	Motor vehicle accident, vehicles moving in intersection	1	0.42%
14	036	Fall into shaft, etc.	1	0.42%
14	312	Motor vehicle accident, both in motion, same direction	1	0.42%
14	330	Motor vehicle accident, non collision, uns.	1	0.42%
14	061	Caught in running or meshing objects	1	0.42%
14	320	Motor vehicle accident, stationary object, uns.	1	0.42%
14	151	Contact with temperature extremes, general heat	1	0.42%
14	052	Fall onto or against objects	1	0.42%
14	182	Contact with radiation or caustics, by ingestion	1	0.42%
14	152	Contact with temperature extremes, general cold	1	0.42%

Table 7.4 (Cont.)

<i>Rank</i>	<i>Type Code</i>	<i>Description</i>	<i>Number of Deaths</i>	<i>Percent of Total</i>
14	180	Contact with radiation or caustics, uns.	1	0.42%
		TOTAL	238	100.00%

uns. = unspecified
 n.e.c. = not elsewhere specified

Chapter 8

Limitations and Reliability Tests

This chapter is divided into two parts. In the first, the limitations of the death rates are presented. In the second, the credibility of the death rates is assessed by comparing them to prior studies and by correlating them with an independent measure of job hazards in a nationally representative sample.

LIMITATIONS

A number of limitations should be noted. First, the data are old. The analysis of the SDS data in this book ends with 1986, although the BLS now has SDS data for 1987 and 1988. No SDS data were collected in 1982 or 1984, and the 1985 and 1986 SDS data list occupation by the 1980 Census codes. The occupation (not industry) data used here--1979-83--were compiled under 1970 code headings. A manual is available that constructs a "cross-walk" between the 1970 and 1980 census codes.¹ But the "cross-walk" is not one-to-one across occupations, as different categories of workers within one 1970 occupation were redefined into a 1980 category and vice versa. For example, persons classified as accountants in 1970 could be classified as either financial managers, accountants, auditors, other financial officers, inspectors, or bookkeepers in the 1980 categories. This is reflected in the warning issued by the Census Bureau in the first paragraph of the "cross-walk" manual: "As a result of the changes . . . most 1980 occupation major groups and detailed categories are not comparable to similar categories in the 1970 census."²

The industry analysis in Chapter 5 and the analysis of causes in Chapter 6 include data from 1979-86. Interested researchers may consider purchasing the 1985-88 SDS data tapes and constructing a ranking of occupations by using 1980 codes. By 1995 the Census of Fatal Occupational Fatalities (CFOI) will also be available for study. The rankings and analyses of causes of deaths

included in this study could then be used as a benchmark to judge whether specific jobs have become more or less safe.

Second, the nature, source, and type of death information are not always informative: "Multiple injuries" is frequently mentioned in the nature category; "Person, other than injured" is mentioned all too often in the source category. "Nonclassifiable" appears too often in the source and type categories. Clearly, the government information coders may want to amend the ANSI lists of categories with more descriptive entries. Homicide, for example, could easily be included in the nature information. On the other hand, the majority of ANSI categories are sufficiently descriptive and some are perhaps overly informative; they list nearly 20 entries for various transportation accidents, including, for example, "Collision with another vehicle, both vehicles in motion"; "Collision with standing vehicle"; "Nonhighway motor vehicle collision (tractors)"; "Running into standing vehicle"; and "Ran off roadway."

Third, the denominator data are estimates of, not the actual number of, persons employed in a given occupation or industry for the 7 to 11 states over the six years. A literature search through government documents did not reveal any annual data on employment within 3-digit occupations or industries for each state for each year. Estimates are therefore essential. Equation 1 in Chapter 3, derived only after the literature search, uses the most finely calibrated government data on occupational and industrial employment available. Some occupation and industry employment data, in fact, involved a special request from the author to the BLS. The occupation denominator data in Appendix A are not available in published form in any BLS documents, and the BLS asked that the special employment data on 40 industries not be published in this book. Even so, these 40 industries are included in Table 5.1 but corresponding employment data do not appear in Appendix B. Future researchers may want to ask the U.S. Census and/or the BLS to prepare special reports for 3-digit occupation and industry employment within the individual states for the years in question.

The 1970 U.S. Census has some state-by-state data on occupation and industry employment. Not all 3-digit occupations are available for every state, however. Use of the 1970 U.S. Census data also requires an assumption that the occupation mix did not change from 1970 to 1979-83. The U.S. Census has its own industry code, distinct from the S.I.C. code. Although some maps or "cross-walks" attempt to draw similarities between the U.S. Census and S.I.C. codes, a serious problem afflicts these maps. The best industry employment data are from S.I.C. codes in *Employment and Earnings*. But these are "establishment" data (i.e., data from firms) and represent private, not public, employment.

The 1980 U.S. Census could not be used because the SDS data from 1979-83 were recorded in 1970 U.S. Census codes. The same S.I.C. versus U.S. Census industry coding problem occurs with the 1980 U.S. Census as with the 1970 U.S. Census.

Information from either the 1970 or 1980 U.S. Census was, therefore, not used in calculating the denominators.

Fourth, there may be problems with judgments by WC boards. Employer groups allege that WC boards are too lenient in their judgments of what constitutes a job-related accident or illness.³ Employee groups claim just the opposite.⁴ Stout and Bell (1991) claim that WC boards discover only 57 percent of all fatal occupational injuries. Toscano and Windau (1992), who are BLS researchers, argue that WC boards miss more than half of injury deaths. Despite this criticism, the estimate of annual injury deaths using these SDS data prior to accounting for the WC undercount--4,985--is close to prior estimates. The BLS estimates 3,000-4,000 injury deaths, while NIOSH, in the National Traumatic Occupational Fatalities Study (NTOF), estimates 7,000 deaths. The SDS/WC count of disease deaths--616 per year--may be even a more severe undercount than the injury undercount, as explained in the sixth criticism, below.

Fifth, some readers might prefer age-adjusted death rates to those unadjusted in the tables in Chapters 4 and 5. But many occupations and industries had fewer than ten deaths. If these were further subdivided by three or four age groups, the number of zero cells would markedly increase. As a result, the reliability of many of the age-occupation or age-industry cells with zero or one or two deaths would diminish. Moreover, death rates need not be age-adjusted to be useful. A popular use of job-related death rates is to test an economic hypothesis of compensating wage differentials. The hypothesis asserts that, other things being equal, workers in dangerous jobs will be paid more than similar workers in safe jobs. In these studies, age and death rate associations are removed with statistical techniques. Nevertheless, no study of compensating wages mentioned in Miller's (1990) exhaustive review uses age-adjusted mortality rates.

Sixth, the great majority of deaths WC authorities viewed as job-related resulted from injuries (roughly 89 percent). By 1986 only a handful of fatal diseases--silicosis, some poisonings, asbestosis, byssinosis, black lung, pneumonia, tumor, tuberculosis, blood diseases, siderosis, and a few heart diseases--were regarded as job-related and only under certain conditions. Even so, results in the tables in Chapter 6 suggest that occupational diseases contribute roughly 11 percent to the total number of job-related deaths. This 11 percent estimate compares favorably with the independent BLS death counts, based upon Occupational Safety and Health (OSHA) Form 200. Every year, firms with 11 or more employees are required to file OSHA Form 200, which identifies, among other things, the number of job-related deaths experienced by that firm during the year. The BLS then compiles the information from the OSHA 200 forms and publishes the data in U.S. Department of Labor bulletins.⁵ Typically only roughly 2-4 percent of job-related deaths were attributed to traditional occupational diseases (asbestosis, silicosis and so on) and over 5 percent due to heart attacks by the BLS during the 1970s and early 1980s.⁶ The 11 percent observed with these SDS data is higher than the 7-9 percent observed

on the OSHA 200 forms. The higher percentage here could be the result of a tendency over time to acknowledge more diseases as job-related. Again, these SDS data cover 1979-81, 1983, and 1985-86.

But both the 11 percent and 7-9 percent estimates may be serious undercounts. As mentioned in Chapter 1, government studies of asbestosis, silicosis, mesothelioma and coal miners' pneumoconiosis recognized 1,700 annual deaths during 1979-86.⁷ These 1,700 would clearly be much more than 11 percent of the SDS estimate of 616 deaths. Ashford (1976) and Baker and Landrigan (1993) suggest that occupational diseases were killing 100,000 per year in the mid 1970s. Markowitz et al. (1989) attributes 5,000-7,000 annual deaths to some form of occupational disease in New York State in the mid 1980s. If New York is representative of the United States, the Markowitz et al. statistics suggest that the number of disease deaths should exceed injury deaths by 8 or 9 to 1 for the United States. In the same vein, if the SDS data were more representative of occupational diseases, coal miners would rank in the first position in Table 4.1 and coal mining would be first in Table 5.1. This is especially evident when one discovers that in 1987, 242,000 miners, widows, and dependents received \$904 million in annual Black Lung benefits⁸ and that the Black Lung Trust was established because at the time (1972) few state WC boards recognized black lung as a compensable disease.⁹

Another disease limitation of the study involves side-smoke. Attention is now being focused on side-smoke hazards faced by bartenders, waiters and waitresses, and flight attendants on international flights. Side-smoke was not widely recognized as hazardous to bar and restaurant employees or flight attendants in the early 1980s.

The death rates presented here, consequently, generally reflect safety and not health hazards.

Seventh, state WC programs do not cover all employees.¹⁰ Self-employed persons may refuse coverage, while federal government employees are excluded. Among wage and salaried workers, roughly 88 percent are covered. Most states exclude farm labor, maritime, railroad, domestic servants, and casual employees, and a few states provide exemptions for employers with three or fewer employees. Finally, although all states provide coverage for all state and local government employees, the coverage is voluntary in several states. Consequently, if the SDS data were more representative of all workers, agricultural occupations such as farmer and farm worker or foreman would be near the top of the list in Table 4.1.

Eighth, problems arise with coding occupations. The SDS files do not record an occupation for roughly 5.5 percent of the deaths. Two occupations with one or more deaths--Sales Representatives Not Elsewhere Classified and Craftsmen Not Elsewhere Classified--do not provide consistent denominator information from all sources. Industry has also not been coded for roughly 5 percent of the deaths. Several industries also have missing or inconsistent

denominator data. These included the industries at the bottom of Table 5.1: Field Crops, Fruits, Horticultural, and so on.

Ninth, 263 occupations appear in Table 4.1. Yet 425 occupations exist in the 1970 Census codes. Apart from the handful of occupations with inconsistent denominator data, this discrepancy suggests that 162 occupations had zero deaths. Even so, it is not reasonable to conclude that these occupations pose no fatality risk to workers. This is a defect of the data. Future researchers will need to obtain data on more than 4,059 fatalities for the occupations. In the meantime, the typical occupation, included as one of the 425 yet excluded from Table 4.1 because of zero recorded deaths, is likely to have a very low death rate. The 162 occupations with zero deaths are included in Appendix F. One of these occupations is Fishermen. In prior studies¹¹ Fishermen were found to have very high death rates. This is especially true in Alaska.¹² But the SDS data do not include states such as Maine or Alaska where fishing can be fatal due to the icy waters and turbulent seas.

Tenth, the ANSI cause-of-death categories do not mention alcohol or drug use. Some observers have suggested that many job-related accidents involve alcohol or drug use. In the few studies that address the issue, however, alcohol in the blood was found in only roughly 1-15 percent of the deceased workers.¹³

TESTS FOR ACCURACY

The data in Tables 4.1 and 5.1 were compared to existing studies. Table 8.1 presents data on rankings from existing studies. The first number in parentheses indicates the rate or relative risk, if available. Most of these rates are measured per 100,000 workers per year. Other rates are measured in ways that are not clear, that is, "extra deaths per 100,000 insurance policy years."¹⁴ The second number in parentheses indicates the rank of the equivalent occupation in Table 4.1 or industry in Table 5.1. For example, in the CDC, MMWR Texas study (1985) (Panel H), Airplane Pilots are ranked first, while in Table 4.1, Pilots are ranked fifth. For Thaler and Rosen (1976) (Panel E), Lumberjacks are ranked second, yet in Table 4.1 they are ranked third. In addition, there was some difficulty in matching occupations and industries from prior studies to the U.S. Census and S.I.C. codes in Tables 4.1 and 5.1. Four of the prior studies are from overseas, where job classifications are quite different from the U.S. Census and S.I.C. categories. In addition, several studies (Panels A, B, and C) could not be matched because they used broad, not narrow, job definitions.

Table 8.1 does not present the entire lists from Thaler and Rosen (1976) (Panel E), Meng (1991) (Panel F), Toscano and Windau's occupations (Panel J), or BLS 1979 industry (Panel L). Thaler and Rosen's list contains 36 of the most dangerous occupations, and Meng's includes 482 occupations. Toscano and Windau's (1993) occupation list provides finer detail on blue-collar than white-collar jobs. The Toscano and Windau (1993) list in Panel J includes only blue-

collar jobs. The BLS 1979 list contains 240 2- and 3-digit industries. Apart from these three, each panel in Table 8.1 reproduces the entire list published by each of the authors indicated.

Table 4.1 ranks 263 occupations. In addition, zero deaths were recorded in 162 occupations in the SDS data. Assuming these imply zero rates, a total of 425 occupations could be ranked. Any rank below 213, therefore, indicates a positive correlation between the rankings in Table 4.1 and the rankings of any of the studies in Table 8.1. Eighty-nine (89) occupations in Table 8.1 could be matched to occupations in Table 4.1. Eighty-eight (88) of these 89 had rankings below 213 in Table 4.1. The one exception was Farmers--panel H, number 8 and rank 252 in Table 4.1. But as this chapter earlier indicates, the SDS data seriously undercount farmer deaths. Assuming the "NA" (those that could not be matched) occupations would have been in our zero death rate list, 30 of 119 would rank in the lower half of Table 4.1. The 88 to 30 ratio still clearly favors the upper half of Table 4.1.

Fishermen are high on several lists in Table 8.1, in direct contrast to the fact that the SDS recorded zero fishermen deaths. Again, this is a deficiency in the SDS data as indicated in the earlier part of this chapter.

The SDS/WC rankings in Tables 4.1 are especially similar to Toscano and Windau's (1993) rankings in Panel J. This is encouraging, since the CFOI was begun after the SDS, and the CFOI provides more complete coverage of injuries than the SDS. The Table 4.1 rankings are also similar to those by the CDC in Panel H.

A unique industry ranking appears in Table 8.1 (Panel L): BLS unpublished death rates from 1979. These unpublished data were made available to the author for a prior study on compensatory wage differentials, and permission was obtained at that time from the BLS to publish the list. These BLS death rates are derived from the same BLS averages for 250,000 to 280,000 firms described in Chapter 2. The BLS death rates have a number of drawbacks (discussed in Chapter 2). But the relative rankings across industries may be more credible than the BLS estimates of the overall size of the injury and illness problem. In addition, Table 8.1 (Panel L) lists the top 10 industries. The complete list appears in Appendix E. The BLS and the SDS industry data were matched to the same S.I.C. codes. To test for the reliability of the SDS death rates, a correlation coefficient was calculated between the SDS rates in Table 5.1 and the 1979 unpublished BLS death rates. A total of 323 industries were available, using the SDS/WC data, and 223 were available, using the BLS 1979 death rate data. The correlation coefficient is .6618 with a corresponding p-value of <.0001 for 120 matched industries with non-zero rates. This provides evidence that the rankings in Table 5.1 are credible.

Tests Using a National Probability Sample

The second test involved the calculation of a partial correlation coefficient between death rates in Table 4.1 and a measure of job hazards from the 1977 *Quality of Employment Survey* (QES).¹⁵ The QES is a University of Michigan survey of persons working 20 or more hours per week in 1977. Approximately 1,515 people from across the United States were interviewed to obtain a national probability sample. The data have been widely used in economic, sociological and occupational medicine studies.¹⁶

A generous number of questions were asked concerning the respondent's job. Each respondent was asked, for example, to identify his or her 3-digit 1970 Census occupation. Unfortunately, industries were coded in U.S. Census, not S.I.C., categories. Respondents were also asked whether they suffered a job-related injury or illness in the last three years. Table 4.1 rates were assigned to each individual, depending on the person's stated 3-digit occupation. Persons who did not have a U.S. Census occupation with a rate were excluded. The Table 4.1 rates so assigned were then used in the subsequent analyses.

The QES investigators asked the following questions:

1. Within the last three years have you had any illnesses or injuries you think were caused or made more severe by any job you had during this period?
2. (Asked only of people stating "yes" to question 1.)
When you had the illness or injury, were you working at your present job?

QES respondents who answered "yes" to both questions 1 and 2 were given a "1" for the variable JobInjury and a "0" otherwise. A least squares regression was then run on QES data for which information on the person's occupational death rate (Table 4.1 estimates) was available. The dependent variable was the person's occupation rate. Additional covariates included age, male sex, and nonwhite race. Least squares was preferred over a Poisson regression since the death rates were not integers. The sample size was 1,386. The partial correlation coefficient between JobInjury and the death rate was .4326, which was statistically significant (generated a p-value) at better than the .0001 level.

SUMMARY

Given (1) the similarities in rankings between occupations and industries in Tables 4.1 and 5.1, (2) the occupational rankings in Table 8.1, panels A through J, (3) the correlation coefficients for Table 8.1, panel L and Table 5.1, and (4) the partial correlation coefficient in the QES, this study concludes that the occupation and industry lists in Tables 4.1 and 5.1 are reasonably accurate.

NOTES

1. See U.S. Bureau of the Census, 1989.
2. See U.S. Bureau of the Census, 1989.
3. See Rejda, 1984.
4. See Rejda, 1984.
5. See U.S. Bureau of Labor Statistics, Department of Labor, 1989.
6. See Hilaski, 1981, and U. S. Bureau of Labor Statistics, Department of Labor, 1989.
7. See National Center for Health Statistics, 1992.
8. See U.S. Department of Health and Human Services, 1990.
9. See Freedman, 1990.
10. See Redja, 1984.
11. See Saporito, 1993.
12. See Schnitzer et al., 1993.
13. See Alleyne et al., 1991; Buchanan, 1989; Jones et al., 1991; Lewis and Cooper, 1989; Podolsky and Richards, 1985; Smith and Kraus, 1988; Cimini and Becker, 1993; and Robinson et al., 1988.
14. See Thaler and Rosen, 1976.
15. See Quinn and Staines, 1979.
16. See Kallenberg, 1986.

Table 8.1**Review of Existing Studies**

*A. Harrison et al., 1989,¹
Australia (per 100,000)*

*B. Bell et al., 1990,² U.S.
(per 100,000)*

-
1. Mining (69.9)
 2. Transport and Communication (38.0)
 3. Farming, fishing, timber (22.1)
 4. Trades (9.1)
 5. Services (5.5)
 6. Sales (2.8)
 7. Professional and technical (2.3)
 8. Executives and managers (2.0)
 9. Sales (1.8)
 10. Clerical (0.4)

-
1. Transportation operative (23.5)
 2. Farmers (21.7)
 3. Laborers (15.8)
 4. Craftworkers (9.0)
 5. Technicians (6.0)
 6. Machinists (3.8)
 7. Managers (3.3)
 8. Service (2.5)
 9. Specialists (2.0)

Table 8.1 (Cont.)

*C. Robinson et al., 1988,² U.S.
(per 100,000)*

-
1. Farming, forestry, fishing (20.5)
 2. Crafts workers (11.4)
 3. Operatives, laborers (8.7)
 4. Service workers (2.6)
 5. Managers, professionals (1.0)
 6. Technical, sales (0.7)

*D. Leigh, 1987,³ U.S.
(per 100,000, Table 4.1 rank)*

-
1. Lumberjack (129, 3)
 2. Airplane pilot (97, 5)
 3. Asbestos workers (78, 10)
 4. Structural metal workers (72, 14)
 5. Electric power lineman (50, 15)
 6. Firefighters (48, 13)
 7. Garbage collectors (40, 16)
 8. Truck drivers (39, 21)
 9. Bulldozer operators (39, 32)
 10. Earth drillers (39, 12)
 11. Craft apprentices (37, NA)
 12. Mine operatives (37, 17)
 13. Boilermakers (35, 23)
 14. Taxicab drivers (34, 22)
 15. Construction laborers (33, 25)
 16. Millwrights (33, 50)
 17. Surveyor helpers (33, 12)
 18. Sheriffs (31, 33)
 19. Roofers (31, 46)
 20. Metal molders (26, 34)
 21. Flight attendants (23, 54)
 22. Oilers and greasers (23, 29)
 23. Excavating operators (21, 40)
 24. Crane operators (19, 48)
 25. Police (17, 47)

Table 8.1 (Cont.)

*E. Thaler and Rosen, 1976,⁴ U.S.
(Extra deaths over average,
Table 4.1 rank)*

-
1. Guards, watchmen (267, 73)
 2. Lumberjacks (256, 3)
 3. Boilermakers (230, 23)
 4. Iron workers (204, 14)
 5. Railroad conductors (203, NA)
 6. Elevator operators (188, 20)
 7. Locomotive firemen (186, NA)
 8. Taxicab drivers (182, 22)
 9. Sheriffs (181, 33)
 10. Bartenders (176, 159)
 11. Mine operatives (176, 17)
 12. Merchant sailors (163, NA)
 13. Ship's officers (156, NA)
 14. Switchmen (152, NA)
 15. Cranemen (147, 48)
 16. Sawyers (133, 56)
 17. Waiters (134, 231)
 18. Cooks (132, 215)
 19. Laundry operatives (126, NA)
 20. Teamsters (114, 10)
 21. Road machine operators (103, 40)
 22. Longshoremen (101, 160)
 23. Truck drivers (98, 21)
 24. Railroad brakemen (88, NA)
 25. Police (78, 47)

*F. Meng, 1991,⁵ Canada
(per 100,000 person years,
Table 4.1 rank)*

-
1. Mining: cutting, and loading (344, 17)
 2. Laborer in mine (331, 17)
 3. Motormen (293, 4)
 4. Air pilots (280, 5)
 5. Laborers in fabric (258, 31)
 6. Mineral ore treating (220, NA)
 7. Insulating occupation (204, 10)
 8. Laborers in ore (167, 17)
 9. Railway sectionmen (146, NA)
 10. Timber cutting (145, 3)
 11. Rotary well drilling (144, 12)
 12. Inspecting, grading (143, 77)
 13. Mining, n.e.c. (141, 17)
 14. Ship deck crew (136, NA)
 15. Rock drilling (126, 1)
 16. Excavating, n.e.c. (123, 40)
 17. Fishing, n.e.c. (116, NA)
 18. Forestry, n.e.c. (114, NA)
 19. Fishing, net trap (114, NA)
 20. Physical sciences (113, NA)
 21. Structural metal (113, 14)
 22. Log hoisting (107, 3)
 23. Forestry conservation (96, NA)
 24. Smelting (95, 34)
 25. Ship engineer officer (95, NA)

Table 8.1 (Cont.)

*G. Marin and Psacharopoulos,
England, 1982
(excess deaths per 1,000,
Table 4.1 rank)*

1. Electrical engineers and electricians (11.6, NA)⁶
2. Bricklayers (9.4, 83)
3. Innkeepers (6.7, NA)
4. Deckhands (6.5, NA)
5. Coal miners, above ground⁷ (5.3, 17)
6. Laborers, n.e.c. (5.0, 7)
7. Ship officers (4.9, NA)
8. Shoe makers (4.4, 197)
9. Garage proprietors (4.1, NA)
10. Watch repairers (3.6, NA)
11. Pharmacists (3.5, 170)
12. Occupational therapists (3.4, NA)
13. Fishermen (3.0, NA)
14. Steel erectors (3.0, 14)
15. Underground coal miners⁷ (2.9, 17)
16. Tailors (2.8, 38)
17. Brewers (2.6, NA)
18. Domestic housekeepers (2.6, NA)
19. Machine tool operators (2.3, 94)
20. Cutters, footwear (2.3, NA)

*H. CDC, MMWR, 1985, Texas
(per 100,000, Table 4.1 rank)*

1. Airplane pilots (217, 5)
2. Oil well drillers (158, 12)
3. Structural metal workers (156, 14)
4. Electric power installers (147, 15)
5. Construction laborers (67, 25)
6. Heavy truck drivers (65, 21)
7. Material moving operatives (61, 40)
8. Farmers (47, 252)
9. Police (46, 47)
10. Electricians (42, 82)

Table 8.1 (Cont.)

*I. Cone et al., 1991,
California (per 100,000
Table 4.1 rank)*

-
1. Fishers and hunters (84.4, NA)
 2. Loggers (78.3, 3)
 3. Police (75.9, 47)
 4. Miners (43.9, 17)
 5. Truck drivers (37.4, 21)

*J. Toscano and Windau, 1993⁸,
CFOI Occupations, U.S.
(per 100,000, Table 4.1 rank)*

-
1. Forestry and logging jobs (142, 3)
 2. Taxi drivers and chauffeurs (50, 22)
 3. Construction laborers (34, 25)
 4. Truck drivers (25, 21)
 5. Farming jobs (20, 20)
 6. Material moving operators (16, 40)
 7. Other laborers (14, 7)
 8. (tie) Construction supervisors (13, NA)
 9. (tie) Electricians (13, 82)
 10. Protective service (13, 73)

Table 8.1 (Cont.)

*K. Toscano and Windau, 1993⁹,
CFOI Industries, U.S.
(per 100,000)*

-
1. Mining (27)
 2. Agriculture, forestry, and fishing (24)
 3. Construction (14)
 4. Transportation (13)
 5. (tie) Wholesale trade (5)
 6. (tie) Federal government (5)
 7. (tie) Manufacturing (4)
 8. (tie) Retail trade (4)
 9. Local government (3)
 10. (tie) Finance, insurance, real estate (2)
 11. (tie) Services (2)
 12. (tie) State government (2)
-

*L. Bureau of Labor Statistics
unpublished 1979 death rate list
by U.S. industry (per 100,000)¹⁰*

-
1. Logging camps (123.9)
 2. Misc. special contractors (70.3)
 3. Oil and gas field services (68.7)
 4. Water well drilling (64.9)
 5. Bituminous coal (63.6)
 6. Water transportation (58.9)
 7. Forestry (57.3)
 8. Oil and gas extraction (57.2)
 9. Nonmetal mineral mining (53.3)
 10. Highway construction (53.19)
-

Table footnotes

1. The Australian study mixes industries with occupations and all categories are 1-digit.
 2. Occupations are 1, not 3-digit.
 3. Study ranks 347 occupations.
 4. Study ranks 36 occupations. Deaths are not necessarily job-related.
 5. Study ranks 482 occupations.
 6. The U.S. Census separates engineers from electricians.
 7. The U.S. Census does not distinguish above from below ground miners.
 8. Study mixes 2- with 3-digit occupations. Only the top 10 are listed.
 9. Study has only 1-digit industries, hence cannot be compared to 3-digit industries in Table 5.1.
 10. Complete list in Appendix E.
- NA = Not applicable, i.e. no equivalent occupation in Table 4.1
n.e.c. = not elsewhere classified
-

Chapter 9

Conclusion

This study reveals which occupations and industries have the highest job-related death rates between 1979 and 1986 and investigates the causes of those deaths. Data are drawn from the Bureau of Labor Statistics' (BLS) Supplemental Data System (SDS) pertaining to the number of job-related, injury and disease deaths, occupation, industry, gender, source, nature, and type of death. The SDS data, in turn, are derived from workers' compensation (WC) records across 11 states. The SDS data suffer a number of deficiencies, including reliance only on information from WC boards. WC statistics probably account for only 40-70 percent of all injury deaths and a lower percent of disease deaths. For example, the undercounts of coal miners' pneumoconiosis (black lung) deaths and deaths among agricultural workers, farmers, fishermen, railroad workers, and merchant sailors are especially severe. Nevertheless, the SDS data appear to be the only current source of numerator information on injuries and illnesses that apply to more than one year or one state and that are capable of indicating the causes of death. Denominator data are derived from the BLS employment data base pertaining to employment in 1- and 3- digit occupations and industries. Some of the BLS data are published, and others were supplied to the author by the BLS, but all denominator data are derived from the same source. Finally, occupations and industries are ranked according to death rates, and all causes of deaths are indicated within each occupation or industry.

The unadjusted estimated number of annual deaths is 5,601 (Chapter 6) for the United States during 1979-86. Given the expected undercount associated with WC coverage and the general undercount of diseases by most surveys, this 5,601 annual estimate compares favorably with prior studies of job-related deaths during 1979-86. The National Institute for Occupational Safety and Health (NIOSH) estimates 7,000 annual injury (not disease) deaths for similar years.¹ In addition, BLS surveys of 250,000 to 280,000 firms indicate 3,500-4,500 injury and disease deaths during the same period. The National Safety Council estimates 12,000 annual injury deaths. The adjusted annual number of

injury deaths is considerably higher. Assuming that 11 percent of the SDS/WC deaths are due to disease and that WC records ignore 57 percent of injury deaths, the National Safety Council estimate appears to be the most similar estimate to ours for the national number of injury deaths. Under these two assumptions, the SDS/WC estimate of annual injury deaths would be 11,593. Other annual estimates (not SDS/WC) range to as high as 100,000 for injury and, especially, disease deaths combined.²

For women and men combined, the occupations with the highest rates per 100,000 per year include Stone Cutters (351), Painter Apprentices (118), Lumberjacks (96), Motormen (94), Airplane Pilots (90), Blasters (85), Miscellaneous Laborers (76), Urban Rail Conductors (76), Teamsters (66), Asbestos Workers (61), Surveying Assistants (56), and Earth Drillers (55). For both genders, the industries with the highest rates per 100,000 include Logging (187), Cut Stone (103), Taxicab (102), Iron Ores Mining (45), Crushed Stone Mining (37), Highway Construction (36), Chemical Mineral Mining (35), Trucking (33), Miscellaneous Special Contractors (32), Lead Mining (31), Heavy Construction (30), Sawmills (28), Fats and Oils (28), and Leather Tanning (28).

For both genders, the nature of deaths most often involve multiple injuries, heart conditions, fractures, and cuts or lacerations. Again for both genders, the source of deaths most often involves highway vehicles, heart failure, bullets, mineral items, ground, floor, aircraft, and fire. The type of injury or illness most often involves being struck by objects, coming into contact with caustics by inhalation, overexertion, being struck by a flying object, and being struck by a falling object.

A number of conclusions can be drawn from this study. (1) The first and perhaps most important conclusion pertains to "common knowledge" about job hazards. Popular perceptions of dangerous jobs are often borne out in these data: Pilots, Lumberjacks, Blasters, Asbestos Workers, and Miners are high on the list. But a great number of high-ranking occupations are not generally regarded as dangerous by the public. These include Surveying Assistants; Laborers in Miscellaneous, Construction, and Farm categories; most apprentices in construction trades; Therapy Assistants; Garbage Collectors; Warehouse Workers; Bakers; Knitters; Geologists; Truck Drivers; Urban Rail Conductors; Greasers; Metal Molders; Teamsters; Delivery Workers; Mechanics; Gas Station Attendants; Sales Managers; Gardeners; Parking Lot Attendants; and Jewelers. The same pattern is apparent for industries. Logging and Iron Ore Mining would be expected to be high on the list. Trucking, Fats and Oils, Car Dealers, Warehousing, Dairy Products, Bakery Products, Confectionery Products, Hats, Real Estate, Garden Stores, and School Buses would not be expected to be dangerous by the public, but they are.

The magnitudes of the differences in many, perhaps most, death rates are also surprising. In Table 4.1, for example, Firefighters (51) face a death rate roughly three times greater than the one for Police (18). Roofers (18) have a rate

very similar to millwrights (17.6), but both have rates less than half that of Truck Drivers (38.7). Messengers and Office Boys (10) have a rate twice that of Welders (5). Recreation Attendants (10.7) have a rate almost double that of Chemists (5.7). Being a Dishwasher (3.0) is more hazardous than being an Electrical Engineer (1.3).

In Table 5.1, there are four to five fold differences in the fatality rates for employees of Confectionary and Dairy Products on the one hand and Motor Vehicle Manufacturing on the other. The Taxicab industry has a rate more than double that of Iron Ore Mining. Sawmills are more than twice as dangerous as Millwork. The Sand and Gravel industry has a rate more than double that of Oil products. The Wood Industry has a rate more than five times that of the Ship Building Industry.

Popular opinions are also in error in assessments of how people die on the job. Police are thought to die from bullets. But Table 4.1 points out that motor vehicle crashes kill as many police officers and sheriffs as bullets. Firefighters are believed to die from flames and smoke, yet the SDS data suggest that more firefighters die from job-related heart failure and vehicle crashes than from flame or smoke. Gas Station Attendants and Bartenders are most frequently murdered. Lawyers are most frequently murdered or die from airplane crashes. Insurance Agents most frequently die from motor vehicle crashes. Managers are most likely to die from vehicle crashes, bullets, or airplane crashes. Farm Laborers are more likely to die from vehicle crashes than mishaps with agricultural machines. Garbage Collectors and Foremen most frequently die from highway vehicle crashes. Janitors most frequently die from contact with shovels or spades. Restaurant Bar Managers and Receptionists most frequently die from bullets.

In general, motor vehicle crashes and homicides account for many more job-related deaths than is commonly believed. For example, many coroners fail to recognize motor vehicle crash deaths or homicide as job-related.³ If experts fail to see many motor vehicle crash deaths and homicides as job-related, can we expect the public to make a better assessment? The importance of crashes and homicide is borne out in these SDS data as well as prior government studies including the BLS surveys of 280,000 firms and the recent Census of Fatal Occupational Injuries (CFOI).⁴

On-the-job deaths are rare events. Information from relatives, friends, or co-workers may not indicate a job is dangerous. This may be especially important for small firms or new firms with little experience in which jobs are hazardous or safe. As most studies indicate, deaths are high in small firms and among the self-employed.⁵

Given the inadequacies of popular opinion, a simple implication appears justified. Information on job hazards needs to be more widely disseminated. One method simply requires that job hazard information with appropriate explanations appear on job application forms. Pre-employment interviews could devote some time to explaining the hazards of the job. In especially dangerous

jobs, new employees, (apprentices, helpers, assistants, and so on), whom we have seen are especially prone to accidents, should receive extensive safety training. The information should be provided in the worker's native tongue (e.g., Spanish, Polish, etc.).

Another method would require that letters be sent from the OSH Administration to workers in high-risk jobs. This method would be similar to the High-Risk Worker Notification Bill that was discussed in Congress in 1987.⁶ A new bill could be introduced that would include notifying workers of injuries as well as diseases.

Simply by providing more and better information to employees, some improvements will begin to occur. Well-informed employees in economic, free markets will begin to pressure employers to improve working conditions. Prospective employees may avoid a job if it is sufficiently hazardous, while current employees may quit. Unions will press for improved conditions. In each case, the employer will have an economic incentive to improve working conditions. The benefits of free market forces derived from well-informed and mobile employees should not be underestimated. Viscusi (1992) argues that free market forces have been more important than OSHA efforts in reducing injury deaths.

A legally required provision of extensive information may also turn the tide on the increasing number of lawsuits involving industrial homicide. Ira Reiner, former District Attorney for Los Angeles, could no longer argue that employers willfully withhold information on the hazards of the job.⁷

Several additional conclusions can be drawn for OSH policy:

(2) The OSH Act virtually ignores motor vehicle crashes, airplane crashes, and homicides. Only recently has OSHA suggested standards for highway vehicles.⁸ No standards have yet to be proposed for pedestrians. Yet deaths from these causes constitute nearly half of all job-related injury deaths in the SDS/WC data and more than half in the CFOI data. The little attention paid to vehicle and airplane crashes as well as homicides continues today with the OSH Administration. New standards should be developed for drivers' and pilots' education, seat belts, as well as truck, tractor, auto, and airplane safety. The seat belt requirement may be especially important. Most benefit-cost calculations indicate that people do not use seat belts as often as they should.⁹ Air bags should be required in all highway vehicles used on-the-job. New standards are needed in all-night convenience stores, liquor stores, and gas stations pertaining to armed guards, mirrors, videotaping, employee safety instruction, and so on.

(3) The OSH Act does not address farm deaths. The OSH Administration rarely promulgates standards for farm work or inspects farms. Although the SDS data do not provide much information on farm deaths because they rely on WC records, many other studies indicate the extensive hazards of farming.¹⁰

(4) Young workers, apprentices, helpers, and assistants in dangerous jobs should receive intensive training in job hazards before they begin working.¹¹

Several conclusions pertain to research. (5) Too little research attention has addressed job-related deaths. The call for a large federal government effort to expand its data collection efforts, first issued by the National Research Council in 1987, is still valid. The Census of Fatal Occupational Injuries (CFOI) is a step in the right direction. However, the CFOI ignores occupational diseases, including heart attacks. The latter is an especially serious omission since heart attacks accounted for the majority of the roughly 23 percent of disease deaths excluded from the CFOI. Our SDS/WC data, fortunately, include heart attacks, but WC undoubtedly underestimates these deaths.

The SDS/WC data used here are inadequate. WC boards may miss as many as 60 percent of the injury deaths and a higher percent of disease deaths.

An extensive data gathering effort on occupational disease deaths should begin. As indicated above, no government agencies have reliable counts of these deaths. Existing estimates range from 1,000 to over 90,000 per year. In collecting these data some attention should be given to "job strain" as a causative factor, especially for heart disease deaths.¹²

(6) Greater research attention should be directed toward alcohol and drug use by workers. It is frequently alleged that an accident was alcohol or drug related. Yet most research indicates that alcohol- or drug-related fatalities account for less (sometimes far less) than 15 percent of job-related accidental deaths.¹³ On the other hand, it could be that job pressures encourage drinking.¹⁴

(7) Research should also address problems in small firms and the self-employed. For example, the most recent CFOI data indicate that 20 percent of all injury fatalities occur among the self-employed. Yet the self-employed comprise less than 10 percent of employed persons.¹⁵

(8) Miscellaneous Laborers and Construction Laborers need to be studied. They are very high on the list in Table 4.1 and involve nearly 200 deaths, yet we know little about them. Are these recently hired workers who have not yet moved into a vocation? Are these casual workers with little job tenure? What percent speak English? What percent are literate? Are they relatively young? Are they trained about job hazards in their native tongue?

(9) Many of the most dangerous jobs are in low-paying occupations. We need to investigate whether the low pay is a risk factor for injuries and especially diseases.¹⁶

CLOSING REMARKS

A quiet health revolution has occurred in the United States over the past 30 years. Our parents and grandparents regarded health and longevity as determined by genetics, fate, luck, and medical care. The only thing healthy persons could do to improve their prospects was to visit the doctor for regular checkups. When sick, we were supposed to find appropriate medical care and take the medicine as prescribed. This is still good advice, but we now recognize

it does not go far enough. We now believe that our health can be improved by our own actions both individually and collectively.

Many of these actions involve personal daily activities and precautions. Over the past 30 years, attention to diet, nutrition, and exercise has soared. We read food labels. We check our blood pressure in machines at the drug store. Beef consumption is down and fish consumption is up. Terms such as “fat,” “fiber,” “cholesterol,” and “salt” have meanings now we could not have imagined 30 years ago. Some sneakers are now more expensive than leather wingtips. We smoke and drink excessively less often. Apart from crack-cocaine, illicit drug use has declined over the past 15 years.

Recent medical evidence indicates that a good night’s sleep improves the immune system and a restless night’s sleep lowers our immune response. People now may begin to give a greater priority to a good night’s sleep than in the past.

Other preventive medicine actions have been collective. Laws have been passed to require seat belt and motorcycle helmet use. Legal restrictions have been placed on smoking in public. Drunk driving laws have become more punitive. Hospitals are now required to release mortality statistics which are regularly published in newspapers. Food labeling laws have become more strict. Finally, several national legislative actions¹⁷ fit this trend:

- 1966 - Highway Safety Act
- 1969 - Coal Mine Health and Safety Act
- 1970 - Clean Air Act
- 1970 - Occupational Safety and Health Act
- 1972 - Consumer Product Safety Act
- 1972 - Water Pollution Control Act Amendments
- 1977 - Clean Air Act Amendments
- 1980 - Comprehensive Environmental Response Compensation Act
- 1987 - High-Risk Worker Notification Bill (never enacted into law)
- 1990 - Clean Air Act Amendments

There is a theme to this litany of actions. Simple daily habits and exposures accumulate over a lifetime to produce good or bad health. While the chance of a serious auto accident (not necessarily fatal) is minimal on any given driving day, over forty years the risk is nearly 50 percent.¹⁸ Most of us work 40 or more hours per week for most of our adult lives. Job duties, exposures, and feelings of success or failure have a cumulative effect over each week, month, and year. Carpal Tunnel Syndrome (CTS) is an example. CTS is the result of repeated stresses to the wrist. These disorders develop gradually over time and are often not treated until the symptoms become chronic and permanent injury results. Until the mid-1980s, CTS was rarely diagnosed as job-related.

We need to give greater attention to the simple daily activities we are required to do on-the-job. Unfortunately, information from medical researchers has not been as thorough as it could be concerning job hazards. There is not

scientific consensus about as simple a concept as the definition of a job-related death. Among the scientists who have examined job-related deaths, the estimated number ranges from 5,000 to over 100,000 per year.

Sigmund Freud once remarked that happiness arises from productivity in love and work. The first component--love--is well studied. There are 230,000 practicing psychologists¹⁹ and 35,500 practicing psychiatrists²⁰ in the United States today. Many counsel patients and clients on family and romantic relationships. The second component--work--is not well studied. There are only roughly 2,700 practicing occupational medicine doctors.²¹ What Stellman and Daum (1973) observed in 1973 is still true today: the average medical student spends as much time studying tropical disease as occupational disease. Out of four years of medical training, the average doctor receives four hours of instruction in occupational medicine.²² Doctors will seldom look for links between a person's job and his or her health problem. The 125 million Americans who work for a living deserve greater medical and scientific attention to how their jobs might kill them.

NOTES

1. See Bell et al., 1990.
2. See Ashford, 1975; Markowitz et al., 1989; and Baker and Landrigan, 1993.
3. See Runyan, Loomis, and Butts, 1994.
4. See Toscano and Windau, 1993.
5. See Toscano and Windau, 1992; and Mendeloff and Kagey, 1990.
6. See Brandt-Rauf, 1989.
7. See Reiner and Chatten-Brown, 1989.
8. See U.S. Department of Labor, 1990.
9. See Viscusi, 1992, p. 10.
10. See Bell et al., 1990; and Purschwitz and Field, 1990.
11. See Belville et al., 1993.
12. See Karasek and Theorell, 1990.
13. See Marine, Derstine, and Jack, 1993; Smith and Kraus, 1988; and Podolsky and Richards, 1985.
14. See Seeman, Seeman, and Budros, 1988.
15. See U.S. Bureau of Labor Statistics, 1991, pp. 7, 31.
16. See Graham, Chung, and Evans, 1992.
17. See Greer, 1993.
18. See Slovic et al., 1979.
19. See U.S. Bureau of the Census, 1992.
20. See American Medical Association, 1992.
21. See American Medical Association, 1992.
22. See Rosenstock, 1981.

Appendices

Appendix A

Denominators for Occupations

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum of 4 years	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
		Actual	17.11%	Actual	15.09%	Actual	17.11%	Actual	17.91%		
1	Accountants	1045	179	1047	158	1096	188	1193	215	739	739.35
2	Architects	84	14	90	14	91	16	94	17	60	60.47
3	Computer programmers	321	55	341	51	357	61	434	78	246	245.69
4	Computer system analysts	177	30	201	30	209	36	242	44	140	140.00
5	Computer specialists, n.e.c.	36	6	43	6	47	8	75	14	34	34.21
6	Aero and astronautical engineers	64	11	73	11	82	14	71	13	49	48.79
10	Chemical engineers	56	10	48	7	65	11	72	13	41	40.92
11	Civil engineers	162	28	180	27	183	31	199	36	122	122.06
12	Electrical and electronic engineers	653	112	357	54	370	63	404	73	302	301.73
13	Industrial engineers	245	42	245	37	131	22	260	47	148	148.17
14	Mechanical engineers	237	41	237	36	247	42	240	43	162	161.83
15	Metallurgical and materials engineers	17	3	17	3	14	2	17	3	11	10.93
20	Mining engineers	6	1	9	1	9	2	10	2	6	5.73
21	Petroleum engineers	19	3	21	3	21	4	23	4	14	14.16
22	Sales engineers	31	5	36	5	35	6	34	6	23	22.85
23	Engineers, n.e.c.	191	33	209	32	241	41	244	44	149	149.43
24	Farm management advisors	10	2	10	2	10	2	10	2	7	6.73
25	Foresters and conservationists	57	10	65	10	57	10	61	11	40	40.31
26	Home management advisors	8	1	4	1	3	1	3	1	3	3.03
30	Judges	21	4	25	4	22	4	24	4	15	15.46
31	Lawyers	478	82	522	79	548	94	606	109	364	363.55
32	Librarians	188	32	182	27	176	30	193	35	125	124.53
33	Archivists and curators	13	2	17	3	15	3	14	3	10	9.88
34	Actuaries	10	2	16	2	13	2	12	2	9	8.51
35	Mathematicians	8	1	8	1	7	1	10	2	6	5.58
36	Statisticians	26	4	24	4	20	3	19	3	15	14.92
42	Agricultural scientists	18	3	21	3	22	4	23	4	14	14.16
43	Atmospheric and space scientists	8	1	6	1	7	1	8	1	5	4.91
44	Biological scientists	55	9	64	10	57	10	63	11	40	40.18
45	Chemists	125	21	128	19	134	23	133	24	88	87.60
51	Geologists	40	7	45	7	43	7	56	10	31	31.09
52	Marine scientists	5	1	6	1	4	1	6	1	4	3.53

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
53	Physicists and astronomers	23	4	24	4	27	5	25	5	17	16.68
54	Life and physical scientists, n.e.c.	8	1	8	1	7	1	6	1	5	4.86
55	Operations and systems researchers and analysts	156	27	170	26	196	34	246	44	130	130.22
56	Personnel and labor relations workers	413	71	452	68	432	74	423	76	289	289.03
61	Chiropractors	21	4	22	3	23	4	27	5	16	15.71
62	Dentists	131	22	140	21	127	22	121	22	87	87.08
63	Optometrists	27	5	21	3	22	4	25	5	16	16.06
64	Pharmacists	135	23	120	18	147	25	168	30	97	96.64
65	Physicians, medical and osteopathic	431	74	426	64	436	75	486	88	300	300.23
71	Podiatrists	7	1	10	2	9	2	9	2	6	5.87
72	Veterinarians	34	6	36	5	33	6	34	6	23	23.02
73	Health practitioners, n.e.c.	1	0	2	0	3	1	3	1	2	1.53
74	Dietitians	57	10	59	9	62	11	70	13	42	41.88
75	Registered nurses	1223	209	1302	196	1313	225	1415	255	885	885.43
76	Therapists	207	35	213	32	244	42	252	45	155	154.73
80	Clinical laboratory technologists	217	37	234	35	268	46	266	48	166	166.24
81	Dental hygienists	43	7	41	6	54	9	58	10	33	33.24
82	Health record technologists	14	2	16	2	14	2	16	3	10	10.09
83	Radiological technologists	104	18	100	15	102	17	108	19	70	69.80
84	Therapy assistants	9	2	11	2	11	2	7	1	6	6.34
85	Health technologists, n.e.c.	147	25	168	25	178	30	202	36	117	117.37
86	Clergy	282	48	265	40	277	47	285	51	187	187.00
90	Religious workers, n.e.c.	58	10	50	8	53	9	61	11	38	37.53
91	Economists	119	20	138	21	157	27	200	36	104	104.10
92	Political scientists	1	0	1	0	2	0	2	0	1	1.02
93	Psychologists	91	16	106	16	115	20	120	22	73	72.87
94	Sociologists	2	0	2	0	1	0	0	0	1	0.82
95	Urban and regional planners	14	2	18	3	20	3	16	3	11	11.42
96	Social scientists, n.e.c.	10	2	13	2	12	2	8	1	7	7.17
100	Social workers	361	62	383	58	383	66	384	69	254	254.31
101	Recreation workers	116	20	116	18	119	20	113	20	78	78.08
102	Agriculture teachers	4	1	7	1	6	1	9	2	4	4.39
103	Atmospheric, earth, marine, & space teachers	8	1	4	1	4	1	7	1	4	3.92
104	Biology teachers	28	5	24	4	25	4	31	6	18	18.28
105	Chemistry teachers	16	3	18	3	18	3	18	3	12	11.78
110	Physics teachers	14	2	18	3	17	3	16	3	11	10.90
111	Engineering teachers	23	4	23	3	25	4	28	5	17	16.73

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
112	Mathematics teachers	36	6	42	6	42	7	55	10	30	29.60
113	Health specialties teachers	50	9	47	7	52	9	48	9	33	33.20
114	Psychology teachers	18	3	19	3	21	4	19	3	13	12.96
115	Business and commerce teachers	29	5	29	4	28	5	29	5	19	19.36
116	Economics teachers	15	3	15	2	16	3	19	3	11	10.99
120	History teachers	11	2	17	3	19	3	16	3	11	10.58
121	Sociology teachers	13	2	9	1	12	2	11	2	8	7.62
122	Social sciences teachers	19	3	18	3	18	3	19	3	12	12.47
123	Art, drama and music teachers	38	7	36	5	44	8	37	7	26	26.13
124	Coaches and physical ed teachers	25	4	28	4	19	3	20	4	15	15.36
125	Education teachers	14	2	10	2	11	2	10	2	8	7.59
126	English teachers	46	8	49	7	53	9	57	10	35	34.61
130	Foreign language teachers	23	4	20	3	17	3	24	4	14	14.19
131	Home economics teachers	4	1	4	1	7	1	7	1	4	3.75
132	Law teachers	3	1	6	1	4	1	4	1	3	2.82
133	Theology teachers	6	1	5	1	7	1	8	1	4	4.42
134	Trade, industrial and technical teachers	5	1	4	1	7	1	6	1	4	3.74
135	Misc. teachers, college and university	37	6	39	6	35	6	32	6	24	23.97
140	Teachers, college and university, subject not specified	62	11	62	9	66	11	70	13	44	43.87
141	Adult education teachers	76	13	72	11	75	13	79	14	51	50.94
142	Elementary school teachers	1374	235	1383	209	1389	238	1434	258	940	939.92
143	Prekindergarten & kindergarten teachers	234	40	243	37	239	41	271	49	166	166.45
144	Secondary school teachers	1213	208	1243	188	1213	208	1231	222	825	824.54
145	Teachers, except college and university, n.e.c.	220	38	216	33	229	39	250	45	154	154.48
150	Agriculture & biological technicians, except health	48	8	51	8	50	9	46	8	33	32.76
151	Chemical technicians	84	14	91	14	101	17	93	17	62	62.15
152	Draftsmen	305	52	335	51	332	57	304	55	214	214.34
153	Electrical & electronic engineering technicians	251	43	260	39	267	46	314	57	184	184.46
154	Industrial engineering technicians	16	3	14	2	14	2	12	2	9	9.41
155	Mechanical engineering technicians	17	3	13	2	11	2	9	2	8	8.37
156	Mathematical technicians	3	1	2	0	2	0	2	0	2	1.52
161	Surveyors	85	15	89	13	88	15	68	12	55	55.29
162	Engineering & science technicians, n.e.c.	231	40	240	36	243	42	266	48	165	165.26
163	Airplane pilots	72	12	76	11	80	14	83	15	52	52.44
164	Air traffic controllers	32	5	32	5	24	4	20	4	18	18.02
165	Embalmers	2	0	4	1	4	1	4	1	2	2.35
170	Flight engineers	5	1	5	1	10	2	8	1	5	4.76

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
171	Radio operators	58	10	60	9	61	10	65	12	41	41.13
172	Tool programmers, numerical control	4	1	5	1	4	1	6	1	3	3.20
173	Technicians, n.e.c.	23	4	25	4	30	5	27	5	18	17.71
174	Vocational and educational counselors	167	29	181	27	186	32	164	30	117	117.27
175	Actors	18	3	15	2	24	4	23	4	14	13.60
180	Athletes and kindred workers	105	18	113	17	131	22	136	25	82	81.94
181	Authors	55	9	70	11	71	12	69	12	45	44.56
182	Dancers	9	2	10	2	14	2	17	3	9	8.51
183	Designers	179	31	193	29	213	36	221	40	136	136.03
184	Editors and reporters	201	34	194	29	202	35	204	37	135	135.00
185	Musicians and composers	145	25	143	22	142	24	149	27	98	97.54
190	Painters and sculptors	189	32	195	29	207	35	208	37	135	134.67
191	Photographers	107	18	111	17	99	17	96	17	69	69.30
192	Public Relations specialists & publicity writers	130	22	126	19	121	21	134	24	86	86.11
193	Radio and TV announcers	18	3	19	3	24	4	24	4	14	14.38
194	Writers, artists & entertainers, n.e.c.	86	15	96	14	109	19	117	21	69	68.94
195	Research workers, not specified	159	27	175	26	188	32	191	34	120	120.21
201	Assessors, controllers, & treasurers: local public administrators	36	6	37	6	40	7	32	6	24	24.35
202	Bank officers & financial managers	620	106	643	97	680	116	731	132	451	451.22
203	Buyers and shippers, farm products	19	3	18	3	17	3	19	3	12	12.30
205	Buyers, wholesale and retail trade	200	34	190	29	191	33	195	35	131	130.72
210	Credit and collection managers	55	9	67	10	66	11	64	12	42	42.35
211	Funeral directors	45	8	33	5	36	6	48	9	27	27.49
212	Health administrators	185	32	210	32	216	37	228	41	141	141.40
213	Construction inspectors, public administrators	24	4	29	4	24	4	24	4	17	16.91
215	Inspectors, except construction public administration	104	18	109	16	108	18	107	19	72	72.01
216	Managers and superintendents, building	152	26	154	23	158	27	183	33	109	109.26
220	Office managers, n.e.c.	416	71	452	68	494	85	507	91	315	315.29
221	Officers, pilots & pursers, ship	28	5	32	5	35	6	41	7	23	23.00
222	Officials & administrators; public administration, n.e.c.	414	71	426	64	469	80	430	78	293	292.87
223	Officials of lodges, societies, & unions	113	19	107	16	116	20	126	23	78	78.04
224	Postmasters & mail superintendents	35	6	34	5	33	6	41	7	24	24.16
225	Purchasing agents and buyers, n.e.c.	232	40	244	37	260	44	260	47	168	167.86
226	Railroad conductors	40	7	37	6	32	5	23	4	22	22.05
230	Restaurant, cafeteria & bar managers	632	108	672	101	707	121	768	138	469	468.94
231	Sales managers & department heads, retail trade	339	58	353	53	337	58	353	64	233	232.56
233	Sales managers, except retail trade	347	59	352	53	367	63	372	67	242	242.33

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
235	School administrators, college	116	20	133	20	137	23	130	23	87	86.79
240	School administrators, elementary and secondary	299	51	298	45	289	49	293	53	198	198.39
245	Managers and administrators, n.e.c.	6067	1038	6289	949	6504	1113	6518	1175	4275	4274.75
260	Advertising agents and sale workers	95	16	110	17	126	22	130	23	78	77.84
261	Auctioneers	6	1	7	1	5	1	6	1	4	4.02
262	Demonstrators	88	15	91	14	105	18	116	21	68	67.66
264	Hucksters and peddlers	193	33	178	27	167	29	197	36	124	123.96
265	Insurance agents brokers & underwriters	534	91	532	80	584	100	645	116	388	387.83
266	Newspaper carriers and vendors	98	17	110	17	111	19	116	21	73	73.27
270	Real estate agents and brokers	616	105	582	88	546	93	534	96	383	382.89
271	Stock and bond sales agents	122	21	134	20	156	27	197	36	103	103.29
281	Sales reps, manufacturing industries	398	68	428	65	410	70	383	69	272	271.87
282	Sales reps, wholesale trade	904	155	915	138	951	163	1020	184	639	639.32
283	Sales clerks, retail trade	2362	404	2343	354	2380	407	2447	441	1606	1605.98
284	Sales workers, except clerks, retail trade	549	94	519	78	514	88	522	94	354	354.28
285	Sales workers, services and construction	197	34	222	33	237	41	268	48	156	156.06
301	Bank tellers	493	84	531	80	558	95	561	101	361	361.07
303	Billing clerks	162	28	163	25	151	26	154	28	106	105.91
305	Bookkeepers	1910	327	1904	287	1922	329	1968	355	1298	1297.69
310	Cashiers	1477	253	1554	234	1621	277	1683	303	1068	1067.92
311	Clerical assistants, social welfare	31	5	38	6	45	8	42	8	26	26.31
312	Clerical supervisors, n.e.c.	237	41	241	36	246	42	270	49	168	167.67
313	Collectors, bill and account	74	13	78	12	90	15	87	16	56	55.51
314	Counter clerks, except food	362	62	350	53	352	60	373	67	242	242.21
315	Dispatchers and starters, vehicle	107	18	103	16	113	19	110	20	73	73.01
320	Enumerators and interviewers	60	10	86	13	57	10	53	10	43	42.55
321	Estimators and investigators, n.e.c.	496	85	534	81	529	91	570	103	359	358.70
323	Expeditors and production controllers	239	41	233	35	249	43	257	46	165	164.98
325	File clerks	305	52	324	49	307	53	278	50	204	203.71
326	Insurance adjusters, examiners & investigators	173	30	174	26	186	32	200	36	124	123.73
330	Library attendants and assistants	165	28	152	23	149	25	150	27	104	103.70
331	Mail carriers, post office	253	43	244	37	239	41	264	48	169	168.59
332	Mail handlers, except post office	167	29	165	25	172	29	182	33	116	115.71
333	Messengers, including telegraph & office helpers	92	16	98	15	94	16	115	21	67	67.34
334	Meter readers, utilities	42	7	53	8	53	9	42	8	32	31.82
341	Bookkeeping and billing machine operators	57	10	50	8	47	8	42	8	33	32.91
342	Calculating machine operators	25	4	17	3	18	3	22	4	14	13.89

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
343	Computer and peripheral equip operators	453	78	522	79	551	94	588	106	357	356.54
344	Duplicating machine operators	25	4	24	4	23	4	22	4	16	15.80
345	Key punch operators	274	47	266	40	243	42	364	66	194	194.21
350	Tabulating machine operators	3	1	2	0	2	0	2	0	2	1.52
355	Office machine operators, n.e.c.	66	11	57	9	60	10	67	12	42	42.24
360	Payroll and timekeeping clerks	236	40	232	35	226	39	224	40	154	154.43
361	Postal clerks	259	44	285	43	263	45	271	49	181	181.17
362	Proofreaders	34	6	38	6	38	7	36	6	25	24.54
363	Real estate appraisers	26	4	34	5	38	7	40	7	23	23.29
364	Receptionists	600	103	629	95	660	113	672	121	432	431.63
370	Secretaries, legal	153	26	186	28	179	31	175	32	116	116.42
371	Secretaries, medical	85	15	84	13	81	14	85	15	56	56.40
372	Secretaries, n.e.c.	3491	597	3605	544	3587	614	3587	647	2402	2401.58
374	Shipping and receiving clerks	484	83	505	76	515	88	499	90	337	337.08
375	Statistical clerks	400	68	387	58	361	62	365	66	254	254.40
376	Stenographers	76	13	64	10	72	12	66	12	47	46.88
381	Stock clerks and storekeepers	529	91	533	80	517	88	497	90	349	348.98
382	Teacher aides, except school monitors	350	60	383	58	373	64	373	67	249	248.73
384	Telegraph operators	8	1	6	1	6	1	8	1	5	4.74
385	Telephone operators	327	56	316	48	301	52	283	51	206	206.14
390	Ticket, station and express agents	144	25	140	21	144	25	154	28	98	98.16
391	Typists	1020	175	1023	154	1011	173	942	170	672	671.67
392	Weighers	49	8	47	7	38	7	39	7	29	29.01
394	Misc. clerical workers	1126	193	1191	180	1250	214	1192	215	801	801.11
395	Not specified clerical workers	468	80	452	68	447	76	471	85	310	309.66
401	Automobile accessories installers	1072	183	1012	153	1013	173	1034	186	696	695.83
402	Bakers	140	24	133	20	132	23	157	28	95	94.91
403	Blacksmiths	10	2	8	1	14	2	14	3	8	7.84
404	Boilermakers	36	6	35	5	37	6	36	6	24	24.26
405	Bookbinders	33	6	29	4	25	4	38	7	21	21.15
410	Brick and stonemasons, except apprentices	205	35	168	25	150	26	145	26	112	112.23
411	Brick & stonemason apprentices	4	1	3	0	3	1	1	0	2	1.83
412	Bulldozer operators	113	19	113	17	99	17	95	17	70	70.45
413	Cabinetmakers	76	13	81	12	73	12	80	14	52	52.14
415	Carpenters, except apprentices	1276	218	1185	179	1091	187	1082	195	779	778.84
416	Carpenter apprentices	18	3	13	2	11	2	9	2	9	8.55
420	Carpet installers	78	13	77	12	83	14	85	15	54	54.49

Appendix A (Cont.)

Numbers in Thousands

Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
421	Cement and concrete finishers	82	14	71	11	63	11	55	10	45	45.44
422	Compositors, & typesetters, except apprentices	186	32	174	26	171	29	192	35	122	121.95
423	Printing trade apprentices, except printing press	2	0	4	1	4	1	6	1	3	2.71
424	Crane, derrick & hoist operators	164	28	148	22	141	24	120	22	96	96.15
425	Decorators and window dressers	129	22	114	17	123	21	123	22	82	82.49
426	Dental lab technicians	43	7	52	8	41	7	46	8	31	30.51
430	Electricians, except apprentices	640	110	648	98	667	114	628	113	435	434.61
431	Electricians apprentices	24	4	29	4	28	5	27	5	18	18.14
433	Electric power line & cable installers & repairers	114	20	117	18	115	20	110	20	77	76.66
434	Electrotypers and stereotypers	1	0	1	0	0	0	1	0	1	0.50
435	Engravers, except photoengravers	10	2	11	2	11	2	10	2	7	7.06
436	Excavating, grading & road machine ops, except bulldozer	444	76	456	69	413	71	399	72	287	287.36
440	Floor layers, except tile setters	22	4	29	4	22	4	24	4	16	16.23
441	Blue collar worker supervisors, n.e.c.	1739	298	1729	261	1790	306	1688	304	1169	1168.97
442	Forge and hammer operators	14	2	13	2	10	2	10	2	8	7.87
443	Furniture and wood finishers	33	6	32	5	35	6	32	6	22	22.23
444	Furriers	4	1	2	0	2	0	2	0	2	1.69
445	Glaziers	43	7	43	6	51	9	50	9	32	31.58
446	Heat treaters, annealers & temperers	20	3	20	3	16	3	13	2	12	11.52
450	Inspectors, scalers & graders; log and lumber	23	4	14	2	17	3	12	2	11	11.12
452	Inspectors, n.e.c.	137	23	148	22	141	24	136	25	94	94.41
453	Jewelers and watchmakers	40	7	41	6	44	8	49	9	29	29.39
454	Job and dye setters, metal	90	15	91	14	93	16	74	13	58	58.38
455	Locomotive engineers	55	9	54	8	46	8	37	7	32	32.10
456	Locomotive firemen	5	1	5	1	3	1	3	1	3	2.66
461	Machinists, except apprentices	552	94	567	86	564	97	515	93	369	369.33
462	Machinists apprentices	13	2	9	1	7	1	7	1	6	6.04
470	Air conditioning, heating and refrigeration mechanics	224	38	207	31	207	35	217	39	144	144.09
471	Aircraft mechanics	124	21	121	18	119	20	130	23	83	83.27
472	Automotive body repairers	192	33	179	27	199	34	197	36	129	129.42
473	Auto mechanics, except apprentices	1081	185	1012	153	1017	174	1039	187	699	698.95
474	Auto mechanic apprentices	9	2	6	1	4	1	5	1	4	4.03
475	Data processing machine repairers	91	16	83	13	97	17	84	15	60	59.83
480	Farm implement mechanics	66	11	57	9	46	8	56	10	38	37.86
481	Heavy equipment mechanics, including diesel	954	163	963	145	986	169	946	171	648	647.76
482	Household appliance & accessory installers & mechanics	156	27	141	21	130	22	150	27	97	97.25
483	Loom fixers	18	3	12	2	13	2	9	2	9	8.74

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
484	Office machine repairers	69	12	80	12	73	12	78	14	50	50.43
485	Radio and TV repairers	131	22	120	18	107	18	111	20	79	78.84
486	Railroad and car shop mechanics	57	10	60	9	59	10	45	8	37	37.01
491	Mechanics, except automobile, apprentices	14	2	7	1	10	2	3	1	6	5.70
492	Misc. mechanics and repairers	246	42	244	37	234	40	267	48	167	167.07
495	Not specified mechanics and repairers	28	5	30	5	29	5	27	5	19	19.15
501	Millers; grain, flour, and feed	4	1	4	1	5	1	5	1	3	3.04
502	Millwrights	112	19	108	16	102	17	89	16	69	68.95
503	Molders, metal except apprentices	57	10	55	8	52	9	42	8	35	34.52
504	Molder apprentices	0	0	0	0	0	0	0	0	0	0.00
505	Motion picture projectionists	10	2	14	2	16	3	9	2	8	8.18
506	Opticians & lens grinders & polishers	44	8	45	6	43	7	50	9	30	30.39
510	Painters, construction & maintenance, except apprentices	483	83	469	71	461	79	473	85	318	317.55
511	Painter apprentices	2	0	1	0	1	0	1	0	1	0.84
512	Paperhangers	19	3	21	3	23	4	17	3	13	13.42
514	Pattern & model makers, except paper	34	6	31	5	37	6	35	6	23	23.13
515	Photoengravers and lithographers	40	7	32	5	31	5	35	6	23	23.29
516	Piano and organ tuners & repairers	11	2	12	2	15	3	11	2	8	8.24
520	Plasterers, except apprentices	25	4	25	4	21	4	29	5	17	16.87
521	Plasterer apprentices	1	0	1	0	0	0	1	0	1	0.50
522	Plumbers & pipe fitters, except apprentices	450	77	478	72	462	79	482	87	315	315.05
523	Plumber & pipe fitter apprentices	14	2	17	3	13	2	11	2	9	9.17
525	Power station operators	27	5	32	5	31	5	40	7	22	21.96
530	Printing press operators, except apprentices	192	33	169	26	164	28	183	33	119	119.40
531	Printing press apprentices	2	0	4	1	1	0	1	0	1	1.30
533	Roller and finishers, metal	15	3	20	3	13	2	13	2	10	10.15
534	Roofers and slaters	148	25	139	21	135	23	133	24	93	93.37
535	Sheetmetal workers & tinsmiths, except apprentices	158	27	161	24	153	26	146	26	104	103.82
536	Sheetmetal apprentices	3	1	5	1	6	1	6	1	3	3.38
540	Shipfitters	10	2	10	2	11	2	18	3	8	8.35
542	Shoe repairers	16	3	18	3	27	5	30	5	15	15.48
543	Sign painter and letters	19	3	19	3	20	3	24	4	14	13.87
545	Stationary engineers	192	33	182	27	178	30	193	35	126	125.56
546	Stone cutters and stone carvers	7	1	5	1	6	1	4	1	4	3.70
550	Structural metal worker	86	15	74	11	80	14	81	15	54	54.17
551	Tellers	35	6	26	4	21	4	23	4	18	17.65
552	Telephone installers and repairers	302	52	309	47	318	54	304	55	208	207.50

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
554	Telephone line installers & repairers	82	14	71	11	77	13	104	19	57	56.66
560	Tile setters	34	6	37	6	36	6	42	8	25	25.13
561	Tool and die makers, except apprentices	184	31	176	27	176	30	162	29	117	117.35
562	Tool and die makers apprentices	12	2	4	1	6	1	6	1	5	4.76
563	Upholsterers	56	10	67	10	70	12	61	11	43	42.66
571	Craft and kindred workers	71	12	65	10	62	11	66	12	44	44.46
580	Former member of the armed forces		0		0		0		0	0	0.00
601	Asbestos & insulation workers	46	8	59	9	53	9	47	8	34	34.31
602	Assemblers	1289	221	1157	175	1145	196	1087	196	787	786.98
603	Blasters	9	2	8	1	11	2	7	1	6	5.89
604	Bottling & canning operatives	45	8	49	7	52	9	43	8	32	31.74
605	Surveyor helpers	15	3	12	2	14	2	12	2	9	8.94
610	Checkers, examiners & inspectors; manufacturing	746	128	736	111	786	134	729	131	505	504.59
611	Clothing ironers and pressers	116	20	114	17	115	20	118	21	78	78.00
612	Cutting operatives, n.e.c.	263	45	267	40	271	46	209	38	169	169.33
613	Dressmakers, except factory	109	19	107	16	114	20	112	20	74	74.49
614	Drillers, earth	51	9	55	8	59	10	53	10	37	36.67
615	Dry wall installers and lathers	111	19	91	14	79	14	87	16	62	61.92
620	Dyers	21	4	20	3	17	3	20	4	13	13.12
621	Fillers, polishers, sanders & buffers	134	23	114	17	113	19	113	20	80	79.83
622	Furnace tenders, smelters & pourers, metal	62	11	62	9	62	11	51	9	40	39.76
623	Garage workers & gas station attendants	369	63	337	51	340	58	320	58	230	229.84
624	Graders and sorters, manufacturing	39	7	35	5	36	6	38	7	25	24.96
625	Produce graders & packers, except factory & farm	32	5	30	5	30	5	36	6	22	21.62
626	Heaters, metal	4	1	4	1	5	1	3	1	3	2.68
630	Laundry and dry cleaning operatives, n.e.c.	185	32	203	31	189	32	188	34	129	128.51
631	Meat cutters & butchers, except manufacturing	219	37	181	27	173	30	183	33	127	127.37
633	Meat cutters & butchers manufacturing	89	15	97	15	96	16	93	17	63	63.05
634	Meat wrappers, retail trade	53	9	55	8	49	8	49	9	35	34.58
635	Metal platers	31	5	34	5	26	4	31	6	20	20.47
636	Milliner	0	0	1	0	0	0	1	0	0	0.33
640	Mine operatives, n.e.c.	185	32	215	32	260	44	222	40	149	148.60
641	Mixing operatives	80	14	89	13	77	13	78	14	54	54.35
642	Oilers and greasers, except auto	46	8	39	6	38	7	32	6	26	26.03
643	Packers & wrappers, except meat & produce	626	107	600	91	579	99	582	105	402	401.62
644	Painters, manufactured articles	185	32	181	27	162	28	139	25	112	111.74
645	Photographic process workers	89	15	88	13	85	15	89	16	59	59.09

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
650	Drill press operatives	67	11	61	9	56	10	41	7	38	37.64
651	Grinding machine operatives	143	24	134	20	134	23	102	18	86	86.00
652	Lathe and milling machine operatives	123	21	114	17	101	17	83	15	70	70.49
653	Precision machine operatives, n.e.c.	71	12	66	10	57	10	49	9	41	40.69
656	Punch and stamping press operatives	158	27	127	19	106	18	96	17	82	81.64
660	Riveters and fasteners	21	4	24	4	20	3	16	3	14	13.52
661	Sailors and deckhands	23	4	27	4	23	4	24	4	16	16.27
662	Sawyers	135	23	106	16	121	21	112	20	80	79.98
663	Sewers and stitchers	810	139	788	119	780	133	735	132	523	523.44
664	Shoemaking machine operators	75	13	71	11	73	12	72	13	49	49.01
665	Solderers	49	8	44	7	48	8	38	7	30	30.09
666	Furnace tenders & stokers, except metal	68	12	68	10	78	13	67	12	47	47.32
670	Carding, lapping & combing operatives	11	2	10	2	14	2	14	3	8	8.31
671	Knitters, loopers and toppers	29	5	24	4	24	4	17	3	16	15.75
672	Spinners, twisters & winders	133	23	119	18	98	17	97	17	75	74.97
673	Weavers	34	6	28	4	28	5	27	5	20	19.70
674	Textile operatives, n.e.c.	133	23	142	21	125	21	115	21	86	86.30
680	Welders and flame cutters	713	122	692	104	709	121	602	109	456	456.24
681	Winding operatives, n.e.c.	66	11	52	8	55	9	50	9	38	37.56
690	Machine operatives, misc. specified	1498	256	1325	200	1291	221	1153	208	885	884.96
692	Machine operatives not specified	324	55	337	51	338	58	298	54	218	217.83
694	Misc. operatives	778	133	756	114	831	142	688	124	513	513.39
695	Not specified operatives	193	33	192	29	168	29	162	29	120	119.94
701	Boat operators	5	1	6	1	4	1	2	0	3	2.81
703	Bus drivers	358	61	356	54	355	61	354	64	240	239.52
704	Conductors & operators, urban rail transit	8	1	9	1	8	1	8	1	6	5.54
705	Delivery and route workers	580	99	584	88	549	94	574	103	385	384.76
706	Fork lift & tow motor operatives	386	66	366	55	363	62	326	59	242	242.14
710	Rail vehicles operators, n.e.c.	11	2	10	2	12	2	11	2	7	7.43
711	Parking attendants	39	7	41	6	30	5	38	7	25	24.84
712	Railroad brake operators & couplers	52	9	45	7	48	8	40	7	31	31.11
713	Railroad switch operators	46	8	45	7	38	7	31	6	27	26.75
714	Taxicab drivers and chauffeurs	164	28	162	24	161	28	152	27	107	107.45
715	Truck drivers	1965	336	1844	278	1843	315	1841	332	1262	1261.64
740	Animal caretakers, except farm	97	17	96	14	93	16	101	18	65	65.20
750	Carpenters' helpers	70	12	61	9	60	10	51	9	41	40.64
751	Construction laborers, except carpenters' helpers	860	147	790	119	743	127	735	132	526	525.97

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
752	Fishers, hunters and trappers	53	9	55	8	49	8	59	11	36	36.39
753	Freight and material handlers	780	133	722	109	735	126	696	125	494	493.62
754	Garbage collectors	65	11	69	10	72	12	73	13	47	47.01
755	Gardeners & groundskeepers, except farm	615	105	601	91	648	111	722	130	437	436.93
760	Longshore workers & stevedores	40	7	37	6	44	8	38	7	27	26.81
761	Timbers cutting & logging workers	96	16	96	14	99	17	94	17	65	64.79
762	Stock handlers	919	157	941	142	968	166	972	175	640	640.06
763	Teamsters	5	1	5	1	4	1	4	1	3	3.02
764	Vehicle washers & equipment cleaners	187	32	158	24	165	28	183	33	117	117.05
770	Warehouse laborers, n.e.c.	258	44	272	41	269	46	278	50	181	181.32
780	Misc. laborers	260	44	238	36	216	37	223	40	158	157.55
785	Not specified laborers	361	62	318	48	303	52	294	53	215	214.59
801	Farmers (owner and tenants)	1405	240	1447	218	1440	246	1415	255	960	960.18
802	Farm managers	42	7	38	6	37	6	37	7	26	25.92
821	Farm supervisors	33	6	32	5	31	5	32	6	22	21.55
822	Farm laborers, wage workers	930	159	895	135	941	161	987	178	633	633.09
823	Farm laborers, unpaid family workers	286	49	284	43	254	43	244	44	179	179.23
824	Farm service laborers, self employed	8	1	7	1	9	2	8	1	5	5.41
901	Lodging quarters cleaners, except private household	178	30	164	25	175	30	184	33	118	118.31
902	Building interior cleaners, n.e.c.	899	154	932	141	936	160	926	167	622	621.52
903	Janitors and sextons	1374	235	1359	205	1332	228	1406	253	921	921.50
910	Bartenders	296	51	299	45	309	53	342	62	210	210.28
911	Waiters' assistants	185	32	204	31	217	37	231	42	141	141.20
912	Cooks, except private household	1251	214	1331	201	1360	233	1396	252	899	899.21
913	Dishwashers	241	41	234	35	249	43	272	49	168	168.18
914	Food counter and fountain workers	444	76	426	64	460	79	463	83	302	302.41
915	Waiters	1363	233	1416	214	1442	247	1496	270	963	963.26
916	Food service workers, n.e.c., except private household	519	89	525	79	538	92	560	101	361	361.01
921	Dental assistants	134	23	138	21	139	24	151	27	95	94.75
922	Health aides, except nursing	281	48	290	44	312	53	333	60	205	205.25
923	Health trainees	9	2	9	1	8	1	9	2	6	5.89
924	Lay midwives	1	0	1	0	1	0	1	0	1	0.67
925	Nursing aides, orderlies & attendants	1024	175	1093	165	1116	191	1136	205	736	735.85
926	Practical nurses	376	64	375	57	395	68	400	72	261	260.60
931	Flight attendants	49	8	41	6	43	7	55	10	32	31.84
932	Attendants, recreation & amusement	149	25	157	24	172	29	188	34	113	112.50
933	Attendants, personal service, n.e.c.	88	15	101	15	97	17	92	17	63	63.48

Appendix A (Cont.)

Numbers in Thousands

1970 Code	Description	1979		1980		1981		1983		Sum	Total
		U.S.	States	U.S.	States	U.S.	States	U.S.	States *		
934	Baggage porters & bellhops	23	4	24	4	25	4	22	4	16	15.80
935	Barbers	109	19	108	16	106	18	100	18	71	71.11
940	Boarding & lodging housekeepers	12	2	8	1	11	2	8	1	7	6.58
941	Bootblacks	3	1	3	0	2	0	2	0	2	1.67
942	Child care workers, except private household	441	75	432	65	417	71	472	85	297	297.07
943	Elevator operators	17	3	15	2	16	3	13	2	10	10.25
944	Hairdressers & cosmetologists	575	98	565	85	564	97	573	103	383	383.42
945	Personal service apprentices	2	0	1	0	0	0	1	0	1	0.67
950	Housekeepers, except private household	139	24	133	20	133	23	182	33	99	99.41
952	School monitors	48	8	44	7	36	6	36	6	28	27.50
953	Ushers, recreation and amusement	16	3	14	2	17	3	16	3	11	10.64
954	Welfare service aides	103	18	87	13	86	15	90	16	62	61.69
960	Crossing guards & bridge tenders	42	7	41	6	45	8	55	10	31	30.99
961	Fire fighters	236	40	227	34	210	36	218	39	150	149.86
962	Guards	569	97	548	83	593	101	685	123	405	404.98
963	Marshals and constables	7	1	7	1	9	2	6	1	5	4.88
964	Police and detectives	484	83	512	77	503	86	505	91	337	337.16
965	Sheriffs and bailiffs	68	12	61	9	69	12	77	14	47	46.52
980	Child care workers, private household	474	81	431	65	443	76	469	85	306	306.47
981	Cooks, private household	26	4	24	4	22	4	18	3	15	15.08
982	Housekeepers, private household	97	17	89	13	98	17	110	20	67	66.62
983	Launderers, private household	6	1	6	1	5	1	7	1	4	4.05
984	Private household cleaners & servants	485	83	491	74	457	78	439	79	314	314.40

* State Factor 17.91% * 1.0064. This factor is different from industries since occupation employment figures stop in 1982.

n.e.c. = not elsewhere classified

Appendix B

Denominators for Industries

Numbers in thousands

SIC	INDUSTRY	1979		1980		1981		1983		1985		1986		Sum of "States" for all years
		US	States	US	States	US	States	US	States	US	States	US	States	
		Actual	17.11%	Actual	15.09%	Actual	17.11%	Actual	17.68%	Actual	17.07%	Actual	15.50%	
101	Iron ores	24.9	4.3	21.0	3.2	21.8	3.7	8.1	1.4	9.2	1.6	8.5	1.3	15.5
102	Copper ores	31.9	5.5	29.4	4.4	36.2	6.2	19.8	3.5	13.4	2.3	12.6	2.0	23.8
131	Crude petrol, natural gas and liquids	201.2	34.4	218.3	32.9	256.6	43.9	280.4	49.6	263.2	44.9	232.7	36.1	241.8
138	Oil and gas field services	275.1	47.1	329.1	49.7	400.6	68.5	359.4	63.5	352.7	60.2	230.8	35.8	324.8
142	Crushed and broken stone	41.2	7.0	38.2	5.8	35.8	6.1	37.9	6.7	36.6	6.2	37.7	5.8	37.7
144	Sand and gravel	38.7	6.6	35.7	5.4	33.9	5.8	33.9	6.0	35.8	6.1	34.0	5.3	35.2
147	Chemical and fertilizer minerals	24.4	4.2	25.3	3.8	27.1	4.6	20.4	3.6	20.3	3.5	19.5	3.0	22.7
152	Residential building construction	690.7	118.2	572.4	86.4	587.0	100.4	483.1	85.4	612.0	104.5	654.0	101.4	596.2
153	Operative builders	84.0	14.4	72.3	10.9	59.2	10.1	56.2	9.9	62.4	10.7	57.6	8.9	64.9
154	Nonresidential building construction	543.6	93.0	576.1	86.9	526.8	90.1	480.9	85.0	565.4	96.5	595.3	92.3	543.9
161	Highway construction	289.7	49.6	259.8	39.2	234.7	40.2	220.2	38.9	263.5	45.0	279.8	43.4	256.2
162	Heavy construction, except highway	608.2	104.1	618.8	93.4	646.0	110.5	577.5	102.1	520.4	88.8	494.1	76.6	575.5
171	Plumbing, heating, air conditioning	544.5	93.2	576.3	87.0	545.5	93.3	492.5	87.1	602.4	102.8	646.5	100.2	563.6
172	Painting, paper hanging, decorating	157.4	26.9	155.5	23.5	139.5	23.9	126.0	22.3	167.0	28.5	171.8	26.6	151.7
173	Electrical work	408.7	69.9	427.6	64.5	415.8	71.1	396.8	70.2	482.5	82.4	530.3	82.2	440.3
174	Masonry, stonework, and plastering	410.0	70.2	387.8	58.5	358.7	61.4	323.5	57.2	425.6	72.6	476.0	73.8	393.7
175	Carpentering and flooring	151.0	25.8	123.0	18.6	162.5	27.8	115.4	20.4	159.2	27.2	176.6	27.4	147.2
176	Roofing and sheet metal work	179.3	30.7	171.2	25.8	157.7	27.0	155.0	27.4	190.8	32.6	212.0	32.9	176.3
201	Meat products	361.5	61.9	361.8	54.6	349.4	59.8	344.0	60.8	369.5	63.1	382.4	59.3	359.4
202	Dairy products	183.3	31.4	177.5	26.8	173.2	29.6	165.1	29.2	163.3	27.9	164.3	25.5	170.3
203	Preserved fruits and vegetables	244.6	41.9	232.0	35.0	240.9	41.2	236.9	41.9	240.9	41.1	242.2	37.5	238.6
204	Grain mill products	144.9	24.8	141.9	21.4	142.6	24.4	135.5	24.0	127.4	21.7	123.5	19.1	135.5
205	Bakery products	234.5	40.1	230.8	34.8	222.1	38.0	218.1	38.6	208.6	35.6	214.9	33.3	220.4
206	Sugar and confectionary products	108.8	18.6	101.6	15.3	110.4	18.9	106.1	18.8	102.7	17.5	98.9	15.3	104.5
207	Fats and oils	40.0	6.8	43.2	6.5	44.3	7.6	36.6	6.5	37.0	6.3	35.2	5.5	39.2
208	Beverages	230.0	39.4	235.7	35.6	236.4	40.4	225.9	39.9	215.2	36.7	216.7	33.6	225.6
209	Miscellaneous food and kindred products	168.8	28.9	166.1	25.1	164.7	28.2	161.7	28.6	171.9	29.3	163.1	25.3	165.3
211	Cigarettes	44.1	7.5	44.9	6.8	47.5	8.1	44.7	7.9	45.5	7.8	43.3	6.7	44.8
221	Weaving mills, cotton	150.7	25.8	151.1	22.8	142.0	24.3	122.9	21.7	107.4	18.3	100.1	15.5	128.5
222	Weaving mills, synthetics	124.9	21.4	117.7	17.8	117.6	20.1	90.7	16.0	91.0	15.5	89.4	13.9	104.7
223	Weaving and finishing mills, wool	21.1	3.6	18.6	2.8	18.8	3.2	17.1	3.0	16.8	2.9	16.6	2.6	18.1
224	Narrow fabric mills	25.5	4.4	24.3	3.7	24.0	4.1	22.0	3.9	21.9	3.7	21.1	3.3	23.0
225	Knitting mills	231.1	39.5	229.2	34.6	219.2	37.5	205.5	36.3	195.6	33.4	205.0	31.8	213.1
226	Textile finishing, except wool	77.7	13.3	74.2	11.2	72.0	12.3	65.0	11.5	65.8	10.8	58.2	9.0	68.2
227	Floor covering mills	61.5	10.5	53.7	8.1	52.5	9.0	48.7	8.6	55.1	9.4	58.4	9.1	54.7
228	Yarn and thread mills	131.0	22.4	130.8	19.7	125.9	21.5	111.7	19.7	99.5	17.0	104.5	16.2	116.6
229	Miscellaneous textile goods	68.5	11.7	64.2	9.7	67.4	11.5	60.3	10.7	52.1	8.9	55.6	8.6	61.1
231	Men's and boys' suits and coats	86.9	14.9	78.7	11.9	78.2	13.4	69.0	12.2	68.8	11.7	60.7	9.4	73.5

Appendix B (Cont.)

Numbers in thousands

SIC	INDUSTRY	1979		1980		1981		1983		1985		1986		Sum
		US	States	US	States	US	States	US	States	US	States	US	States	
232	Men's and boys' furnishings	365.5	62.5	372.1	56.1	351.1	60.1	326.2	57.7	332.1	56.7	316.9	49.1	342.2
233	Women's and misses' outerwear	439.0	75.1	433.8	65.5	411.8	70.5	389.7	68.9	373.3	63.7	353.8	54.8	398.5
234	Women's and children's undergarments	89.7	15.3	89.6	13.5	89.0	15.2	84.1	14.9	82.1	14.0	76.3	11.8	84.8
236	Children's outerwear	66.3	11.3	63.2	9.5	65.2	11.2	61.6	10.9	62.1	10.6	63.4	9.8	63.4
238	Miscellaneous apparel and accessories	56.9	9.7	56.8	8.6	55.1	9.4	46.7	8.3	43.0	7.3	42.4	6.6	49.9
239	Miscellaneous fabricated textile products	189.3	32.4	182.2	27.5	183.9	31.5	172.5	30.5	180.6	30.8	183.4	28.4	181.1
241	Logging camps and logging contractors	90.3	15.5	84.0	12.7	83.6	14.3	84.3	14.9	82.5	14.1	81.5	12.6	84.0
242	Sawmills and planing mills	231.1	39.5	214.0	32.3	207.3	35.5	202.0	35.7	198.3	33.8	199.2	30.9	207.7
243	Millwork, plywood, and structural members	224.7	38.4	198.0	29.9	201.8	34.5	204.6	36.2	225.7	38.5	256.0	39.7	217.2
244	Wood containers	43.6	7.5	42.9	6.5	42.1	7.2	39.6	7.0	42.6	7.3	41.8	6.5	41.9
245	Wood buildings and mobile homes	82.9	14.2	67.2	10.1	64.8	11.1	72.7	12.9	74.6	12.7	70.9	11.0	72.0
249	Miscellaneous wood products	85.8	14.7	80.7	12.2	79.7	13.6	73.8	13.0	79.0	13.5	77.4	12.0	79.0
251	Household furniture	323.0	55.3	309.0	46.6	310.3	53.1	278.8	49.3	293.4	50.1	296.0	45.9	300.2
252	Office furniture	46.5	8.0	49.4	7.5	51.7	8.8	57.6	10.2	69.1	11.8	66.8	10.4	56.6
253	Public building and related furniture	25.6	4.4	25.2	3.8	24.6	4.2	21.4	3.8	27.9	4.8	26.5	4.1	25.0
254	Partitions and fixtures	64.9	11.1	62.3	9.4	61.8	10.6	59.7	10.6	67.6	11.5	69.7	10.8	64.0
259	Miscellaneous furniture and fixtures	26.9	4.6	27.8	4.2	28.2	4.8	33.3	5.9	38.7	6.6	38.0	5.9	32.0
261	Paper and pulp mills	199.8	34.2	205.6	31.0	204.1	34.9	194.5	34.4	200.3	34.2	197.1	30.6	199.3
262	Paper mills, except building paper	170.4	29.2	177.5	26.8	176.5	30.2	168.1	29.7	175.1	29.9	172.4	26.7	172.5
263	Paperboard mills	71.4	12.2	64.3	9.7	64.3	11.0	59.2	10.5	56.4	9.6	55.1	8.5	61.6
264	Miscellaneous converted paper products	226.2	38.7	215.7	32.5	220.3	37.7	217.1	38.4	231.2	39.5	239.2	37.1	223.9
265	Paperboard containers and boxes	216.7	37.1	208.3	31.4	203.6	34.8	187.9	33.2	195.3	33.3	198.5	30.8	200.7
271	Newspapers	420.7	72.0	432.1	65.2	432.0	73.9	421.6	74.5	453.7	77.4	461.3	71.5	434.6
272	Periodicals	82.3	14.1	83.2	12.6	92.7	15.9	99.4	17.6	108.8	18.6	112.4	17.4	96.1
273	Books	103.0	17.6	105.2	15.9	101.3	17.3	96.2	17.0	105.6	18.0	113.0	17.5	103.4
274	Miscellaneous publishing	48.5	8.3	47.2	7.1	50.1	8.6	51.7	9.1	71.3	12.2	80.2	12.4	57.7
275	Commercial printing	412.1	70.5	424.6	64.1	432.5	74.0	432.5	76.5	488.3	83.4	513.5	79.6	448.0
276	Manifold business forms	48.4	8.3	47.1	7.1	48.6	8.3	48.1	8.5	48.0	8.2	47.6	7.4	47.8
278	Blankbooks and bookbinding	64.6	11.1	63.7	9.6	51.1	8.7	61.6	10.9	70.2	12.0	74.6	11.6	63.8
279	Printing trade services	40.6	6.9	45.1	6.8	44.7	7.6	47.2	8.3	50.9	8.7	53.4	8.3	46.7
281	Industrial inorganic chemicals	171.3	29.3	166.1	25.1	153.4	26.2	152.7	27.0	142.7	24.4	137.1	21.3	153.2
282	Plastics materials and synthetics	217.4	37.2	203.8	30.8	199.8	34.2	179.3	31.7	168.4	28.7	166.7	25.8	188.4
283	Drugs	190.9	32.7	199.2	30.1	200.8	34.4	201.0	35.5	204.7	34.9	206.0	31.9	199.5
284	Soap, cleaners, and toilet goods	138.3	23.7	137.9	20.8	139.4	23.9	150.7	26.6	147.5	25.2	147.2	22.8	143.0
285	Paints and allied products	69.5	11.9	66.6	10.0	64.5	11.0	61.6	10.9	62.8	10.7	63.4	9.8	64.4
286	Industrial organic chemicals	165.6	28.3	172.6	26.0	170.8	29.2	162.5	28.7	164.4	28.1	154.9	24.0	164.4
287	Agricultural chemicals	69.1	11.8	71.8	10.8	72.9	12.5	60.8	10.7	59.8	10.2	57.3	8.9	65.0
289	Miscellaneous chemical products	90.7	15.5	94.7	14.3	95.8	16.4	89.8	15.9	92.1	15.7	94.0	14.6	92.4
291	Petroleum refining	168.5	28.8	154.2	23.3	169.6	29.0	158.6	28.0	139.5	23.8	126.8	19.7	152.6
295	Paving and roofing materials	33.7	5.8	30.5	4.6	28.8	4.9	26.5	4.7	27.0	4.6	26.0	4.0	28.6
301	Tires and inner tubes	123.7	21.2	102.7	15.5	121.9	20.9	101.5	17.9	92.0	15.7	88.0	13.6	104.8
302	Rubber and plastic footwear	23.0	3.9	22.5	3.4	20.2	3.5	18.6	3.3	13.7	2.3	11.9	1.8	18.3

Appendix B (Cont.)

Numbers in thousands

SIC	INDUSTRY	1979		1980		1981		1983		1985		1986		Sum
		US	States	US	States	US	States	US	States	US	States	US	States	
		303	Reclaimed rubber, rubber & plastics hose and belting	23.2	4.0	21.4	3.2	23.2	4.0	21.5	3.8	20.4	3.5	
306	Fabricated rubber products, n.e.c.	115.2	19.7	106.5	16.1	105.9	18.1	100.0	17.7	108.9	18.6	108.3	16.8	107.0
307	Miscellaneous plastic products	482.4	82.5	457.6	69.1	473.2	81.0	485.3	85.8	559.7	95.5	571.2	88.5	502.4
311	Leather tanning and finishing	20.3	3.5	18.8	2.8	20.1	3.4	19.1	3.4	15.3	2.6	14.0	2.2	17.9
314	Footwear, except rubber	148.9	25.5	151.5	22.9	142.6	24.4	132.8	23.5	104.7	17.9	92.5	14.3	128.4
316	Luggage	17.4	3.0	14.6	2.2	15.4	2.6	13.3	2.4	12.9	2.2	10.9	1.7	14.1
317	Handbags and personal leather goods	32.8	5.6	30.8	4.6	29.3	5.0	27.0	4.8	23.1	3.9	19.8	3.1	27.1
321	Flat glass	20.4	3.5	18.1	2.7	18.8	3.2	17.1	3.0	15.2	2.6	14.9	2.3	17.4
322	Glass and glassware, pressed or blown	131.8	22.6	127.4	19.2	122.8	21.0	103.2	18.2	93.3	15.9	92.2	14.3	111.2
323	Products of purchased glass	49.3	8.4	45.2	6.8	47.3	8.1	42.7	7.5	51.6	8.8	53.4	8.3	48.0
324	Cement, hydraulic	33.2	5.7	31.9	4.8	29.3	5.0	25.8	4.6	24.0	4.1	22.7	3.5	27.7
325	Structural clay products	50.2	8.6	45.5	6.9	43.2	7.4	36.4	6.4	38.2	6.5	37.7	5.8	41.6
326	Pottery and related products	46.2	7.9	45.1	6.8	44.2	7.6	38.7	6.8	38.4	6.6	35.0	5.4	41.1
327	Concrete, gypsum, and plaster products	218.0	37.3	200.9	30.3	191.9	32.8	186.9	33.0	211.2	36.1	214.6	33.3	202.8
329	Miscellaneous nonmetallic mineral products	148.9	25.5	141.6	21.4	140.8	24.1	113.6	20.1	116.9	20.0	112.4	17.4	128.4
331	Blast furnaces and basic steel products	566.5	96.9	508.2	76.7	506.2	86.6	336.3	59.5	302.7	51.7	283.2	43.9	415.3
332	Iron and steel foundries	238.2	40.8	204.5	30.9	203.4	34.8	143.3	25.3	144.6	24.7	135.5	21.0	177.4
333	Primary nonferrous metals	72.4	12.4	68.3	10.3	70.9	12.1	50.2	8.9	46.5	7.9	39.2	6.1	57.7
335	Nonferrous rolling and drawing	219.3	37.5	211.1	31.9	206.0	35.2	183.5	32.4	191.2	32.6	184.5	28.6	198.3
336	Nonferrous foundries	98.1	16.8	89.7	13.5	90.7	15.5	84.2	14.9	86.5	14.8	83.3	12.9	88.4
341	Metal cans and shipping containers	78.4	13.4	77.1	11.6	71.5	12.2	62.6	11.1	55.3	9.4	58.2	9.0	66.8
342	Cutlery, hand tools, and hardware	184.6	31.6	168.6	25.4	167.9	28.7	139.1	24.6	145.8	24.9	141.6	21.9	157.2
343	Plumbing and heating, except electric	76.2	13.0	69.4	10.5	58.0	9.9	63.0	11.1	63.1	10.8	66.0	10.2	65.6
344	Fabricated structural metal products	520.5	89.1	517.9	78.2	498.7	85.3	433.0	76.6	447.4	76.4	434.4	67.3	472.8
345	Screw machine products, bolts, etc.	120.2	20.6	108.8	16.4	103.0	17.6	86.8	15.3	98.0	16.7	96.6	15.0	101.7
346	Metal forgings and stampings	304.3	52.1	263.0	39.7	255.0	43.6	232.7	41.1	248.3	42.4	236.0	36.6	255.5
347	Metal services, n.e.c.	108.9	18.6	108.5	16.4	103.6	17.7	92.9	16.4	108.4	18.5	113.3	17.6	105.2
348	Ordinance and accessories, n.e.c.	60.9	10.4	60.8	9.2	50.2	8.6	65.5	11.6	79.6	13.6	79.3	12.3	65.6
349	Miscellaneous fabricated metal products	272.8	46.7	253.1	38.2	255.7	43.8	220.7	39.0	226.4	38.6	214.0	33.2	239.5
351	Engines and turbines	139.1	23.8	135.3	20.4	133.3	22.8	99.6	17.6	108.8	18.5	97.2	15.1	118.2
352	Farm and garden machinery	173.9	29.8	169.9	25.6	164.9	28.2	128.0	22.6	106.6	18.2	93.1	14.4	138.9
353	Construction and related machinery	396.4	67.8	392.9	59.3	399.5	68.4	264.6	46.8	253.3	43.2	227.6	35.3	320.8
354	Metaworking machinery	386.4	66.1	371.5	56.1	360.6	61.7	281.4	49.8	313.0	53.4	305.7	47.4	334.4
355	Special industry machinery	208.3	35.6	208.8	31.5	202.8	34.7	160.3	28.3	167.5	28.6	160.8	24.9	183.7
356	General industrial machinery	327.1	56.0	322.9	48.7	313.5	53.6	254.1	44.9	273.8	46.7	262.6	40.7	290.7
357	Office and computing machines	382.9	65.5	430.8	65.0	454.0	77.7	489.3	86.5	505.9	86.4	479.3	74.3	455.4
358	Refrigeration and service machinery	187.3	32.0	173.0	26.1	180.9	31.0	161.1	28.5	173.6	29.6	170.3	26.4	173.6
359	Miscellaneous machinery, except electrical	279.0	47.7	284.3	42.9	303.0	51.8	250.0	44.2	278.8	47.6	285.3	44.2	278.5
361	Electric distributing equipment	121.8	20.8	119.5	18.0	120.6	20.6	108.6	19.2	115.1	19.6	115.6	17.9	116.3
362	Electrical industrial apparatus	259.0	44.3	238.5	36.0	238.3	40.8	192.3	34.0	197.8	33.8	197.1	30.6	219.4
363	Household appliances	176.7	30.2	169.8	25.6	166.0	28.4	147.9	26.1	143.3	24.5	136.7	21.2	156.1
364	Electric lighting and wiring equipment	228.4	39.1	212.6	32.1	209.0	35.8	186.3	32.9	198.3	33.8	193.1	29.9	203.6

Appendix B (Cont.)

Numbers in thousands

SIC	INDUSTRY	1979		1980		1981		1983		1985		1986		Sum
		US	States	US	States	US	States	US	States	US	States	US	States	
365	Radio and TV receiving equipment	112.0	19.2	108.2	16.3	109.8	18.8	87.6	15.5	84.9	14.5	79.5	12.3	96.6
366	Communication equipment	366.0	62.6	550.8	83.1	545.4	93.3	579.9	102.5	659.3	112.5	658.2	102.0	556.1
367	Electronic components and accessories	514.9	88.1	558.3	84.2	575.4	98.5	592.5	104.8	657.2	112.2	638.1	98.9	586.6
369	Miscellaneous electrical equipment and supplies	166.3	28.5	168.6	25.4	168.9	28.9	149.6	26.4	151.6	25.9	150.8	23.4	158.5
371	Motor vehicles and equipment	982.8	168.2	773.8	116.8	723.2	123.7	772.7	136.6	672.3	114.8	842.7	130.6	790.7
372	Aircraft and parts	605.1	103.5	655.4	98.9	656.7	112.4	579.8	102.5	646.9	110.4	672.8	104.3	632.0
373	Ship and boat building and repairing	214.5	36.7	213.8	32.3	226.3	38.7	199.2	35.2	192.5	32.9	184.5	28.6	204.4
374	Railroad equipment	70.8	12.1	67.7	10.2	50.4	8.6	29.7	5.3	34.3	5.9	29.0	4.5	46.6
376	Guided missiles, space vehicles and parts	98.5	16.9	112.3	16.9	119.7	20.5	143.0	25.3	177.0	30.2	189.5	29.4	139.1
379	Miscellaneous transportation equipment	58.2	10.0	47.3	7.1	40.4	6.9	46.9	8.3	53.0	9.0	53.5	8.3	49.6
381	Engineering and scientific instruments	72.3	12.4	78.1	11.8	78.3	13.4	80.6	14.3	82.8	14.1	83.2	12.9	78.8
382	Measuring and controlling devices	228.3	39.1	237.5	35.8	246.4	42.2	237.5	42.0	357.4	61.0	250.4	38.8	258.9
383	Optical instruments and lenses	31.2	5.3	34.7	5.2	33.1	5.7	33.6	5.9	34.6	5.9	32.1	5.0	33.1
384	Medical instruments and supplies	147.3	25.2	145.9	22.0	159.8	27.3	159.6	28.2	171.7	29.3	182.9	28.3	160.4
385	Ophthalmic goods	45.1	7.7	46.9	7.1	41.6	7.1	37.0	6.5	39.9	6.8	39.9	6.2	41.4
386	Photo equipment and supplies	137.5	23.5	133.8	20.2	139.7	23.9	128.2	22.7	124.1	21.2	117.4	18.2	129.7
387	Watches, clocks and watchcases	28.7	4.9	22.8	3.4	19.0	3.3	17.0	3.0	13.6	2.3	11.1	1.7	18.6
391	Jewelry, silverware, and plated ware	60.2	10.3	56.5	8.5	55.7	9.5	56.1	9.9	55.7	9.5	53.4	8.3	56.1
393	Musical instruments	24.6	4.2	21.0	3.2	22.2	3.8	19.5	3.4	15.8	2.7	14.6	2.3	19.6
394	Toys and sporting goods	120.5	20.6	115.3	17.4	114.6	19.6	110.5	19.5	107.5	18.4	97.0	15.0	110.5
395	Pens, pencils, office and art supplies	41.5	7.1	39.9	6.0	38.9	6.7	30.6	5.4	31.9	5.4	31.7	4.9	35.5
396	Costume, jewelry and notions	61.3	10.5	52.9	8.0	47.7	8.2	39.1	6.9	38.7	6.6	39.5	6.1	46.3
399	Miscellaneous manufactures	144.3	24.7	136.4	20.6	136.2	23.3	126.6	22.4	126.7	21.6	130.8	20.3	132.9
411	Local and suburban transportation	72.8	12.5	81.8	12.3	93.3	16.0	86.3	15.3	89.7	15.3	95.8	14.8	86.2
412	Taxis	64.4	11.0	58.5	8.8	50.8	8.7	39.6	7.0	38.5	6.6	36.9	5.7	47.8
413	Intercity highway transportation	36.9	6.3	40.8	6.2	39.4	6.7	32.0	5.7	36.1	6.2	36.2	5.6	36.6
415	School buses	73.3	12.5	76.7	11.6	83.4	14.3	86.1	15.2	87.3	14.9	89.5	13.9	82.4
421	Trucking and trucking terminals	1285.7	220.0	1194.3	180.2	1157.0	198.0	1132.5	200.2	1284.9	219.3	1311.3	203.3	1221.0
422	Public warehousing	90.6	15.5	90.2	13.6	82.8	14.2	80.6	14.3	99.9	17.1	98.1	15.2	89.8
445	Local water transport. (1)	30.5	5.2	28.6	4.3	28.2	4.8	25.6	4.5	29.0	5.0	27.5	4.3	28.1
446	Water transportation services (1)	123.2	21.1	115.5	17.4	113.8	19.5	103.3	18.3	117.0	20.0	98.2	15.2	111.4
451	Air transportation	377.4	64.6	402.5	60.7	408.4	69.9	496.7	87.8	474.5	81.0	493.2	76.4	440.4
458	Air transportation services (1)	49.1	8.4	52.3	7.9	53.2	9.1	52.1	9.2	62.1	10.6	66.9	10.4	55.6
471	Freight forwarding (1)	44.6	7.6	46.4	7.0	49.9	8.5	52.5	9.3	68.5	11.7	68.6	10.6	54.8
481	Telephone communication	1045.1	178.8	1078.3	162.7	1071.6	183.4	953.7	168.6	918.2	156.7	874.1	135.5	985.7
483	Radio and TV broadcasting	192.2	32.9	202.2	30.5	202.5	34.6	230.4	40.7	236.2	40.3	243.4	37.7	216.8
491	Electric services	373.1	63.8	393.2	59.3	412.5	70.6	434.3	76.8	452.7	77.3	456.7	70.8	418.6
492	Gas production and distribution	168.9	28.9	169.9	25.6	175.2	30.0	175.4	31.0	171.4	29.3	165.1	25.6	170.4
493	Combination utility services	195.5	33.5	196.8	29.7	207.1	35.4	197.2	34.9	201.1	34.3	206.5	32.0	199.8
495	Sanitary services	46.7	8.0	50.7	7.7	49.5	8.5	51.0	9.0	63.8	10.9	70.8	11.0	55.0
501	Motor vehicles and automotive equipment	373.1	63.8	427.5	64.5	416.6	71.3	405.2	71.6	432.7	73.9	428.1	66.4	411.5
502	Furniture and home furnishings	168.9	28.9	116.3	17.5	120.1	20.5	115.7	20.5	130.6	22.3	135.1	20.9	130.7

Appendix B (Cont.)

Numbers in thousands

SIC	INDUSTRY	1979		1980		1981		1983		1985		1986		Sum
		US	States	US	States	US	States	US	States	US	States	US	States	
503	Lumber and construction materials	195.5	33.5	191.3	28.9	192.0	32.9	189.5	33.5	211.7	36.1	228.7	35.4	200.3
504	Sporting goods, toys and hobby goods	64.1	11.0	72.9	11.0	74.7	12.8	72.4	12.8	75.1	12.8	83.5	12.9	73.3
505	Metals and minerals, except petroleum	153.1	26.2	152.7	23.0	154.5	26.4	130.8	23.1	141.1	24.1	138.4	21.5	144.3
506	Electrical goods	412.8	70.6	409.7	61.8	422.5	72.3	431.5	76.3	496.7	84.8	495.2	76.8	442.6
507	Hardware, plumbing, and heating equipment	240.4	41.1	244.7	36.9	244.6	41.9	236.4	41.8	261.5	44.6	265.4	41.1	247.5
508	Machinery, equipment, and supplies	1238.2	211.9	1304.3	196.8	1347.8	230.6	1305.3	230.8	1473.6	251.5	1508.8	233.9	1355.5
509	Miscellaneous durable goods	207.5	35.5	210.6	31.8	203.5	34.8	176.4	31.2	193.4	33.0	199.8	31.0	197.3
511	Paper and paper products	139.6	23.9	148.6	22.4	155.0	26.5	161.0	28.5	183.8	31.4	189.2	29.3	162.0
512	Drugs, properties, and sundries	142.2	24.3	152.8	23.1	151.1	25.9	153.8	27.2	161.2	27.5	172.2	26.7	154.6
513	Apparel, piece goods, and notions	169.3	29.0	177.6	26.8	158.3	27.1	168.5	29.8	186.4	31.8	196.9	30.5	175.0
514	Groceries and related products	645.0	110.4	654.4	98.7	678.7	116.1	657.1	116.2	744.4	127.1	761.7	118.1	686.5
516	Chemicals and related products	116.9	20.0	126.7	19.1	129.5	22.2	134.3	23.7	132.3	22.6	130.7	20.3	127.9
517	Petroleum and petroleum products	224.6	38.4	233.3	35.2	225.0	38.5	217.8	38.5	208.5	35.6	202.4	31.4	217.6
518	Beer, wine, and distilled beverages	138.7	23.7	136.7	20.6	141.8	24.3	145.8	25.8	158.0	27.0	151.4	23.5	144.8
519	Miscellaneous nondurable goods	402.8	68.9	387.1	58.4	381.6	65.3	389.2	68.8	429.3	73.3	434.6	67.4	402.1
521	Lumber and other building materials	333.1	57.0	329.8	49.8	323.9	55.4	313.1	55.4	351.2	59.9	369.9	57.3	334.8
525	Hardware stores	146.9	25.1	154.4	23.3	149.7	25.6	151.0	26.7	159.7	27.3	157.0	24.3	152.3
531	Department stores	1834.4	313.9	1805.4	272.4	1891.1	323.6	1885.3	333.3	1987.4	339.2	1982.7	307.3	1889.8
533	Variety stores	283.1	48.4	269.8	40.7	251.9	43.1	210.5	37.2	223.3	38.1	230.8	35.8	243.4
539	Miscellaneous general merchandise stores	147.9	25.3	141.1	21.3	125.2	21.4	113.9	20.1	143.5	24.5	136.1	21.1	133.7
541	Grocery stores	2003.3	342.8	2099.2	316.8	2154.8	368.7	2183.0	386.0	2479.9	423.3	2554.3	395.9	2233.4
542	Meat markets and freezer provisioners	52.3	8.9	52.7	8.0	55.7	9.5	59.3	10.5	63.1	10.8	63.8	9.9	57.6
545	Dairy products stores (1)	30.3	5.2	31.8	4.8	32.7	5.6	33.1	5.9	37.6	6.4	47.2	7.3	35.2
546	Retail bakeries	125.6	21.5	128.0	19.3	126.7	21.7	133.5	23.6	163.3	27.9	164.4	25.5	139.4
551	New and used car dealers	893.8	152.9	811.0	122.4	764.7	130.8	751.3	132.8	897.1	153.1	941.3	145.9	838.0
553	Auto and home supply stores	259.7	44.4	269.3	40.6	270.7	46.3	258.8	45.8	300.4	51.3	309.3	47.9	276.4
554	Gasoline service stations	285.6	48.9	570.9	86.1	561.5	96.1	530.7	93.8	611.3	104.3	612.6	95.0	524.2
561	Men's and boys' clothing and furnishings	142.0	24.3	139.2	21.0	134.2	23.0	117.5	20.8	111.1	19.0	110.9	17.2	125.2
562	Women's ready-to-wear stores	356.7	61.0	359.1	54.2	354.4	60.6	347.8	61.5	382.0	65.2	397.6	61.6	364.2
565	Family clothing stores	175.7	30.1	186.1	28.1	188.4	32.2	174.1	30.8	205.6	35.1	227.8	35.3	191.6
566	Shoe stores	175.0	29.9	179.8	27.1	200.5	34.3	201.2	35.6	206.0	35.2	211.8	32.8	194.9
571	Furniture and home furnishings stores	366.3	62.7	372.6	56.2	378.5	64.8	351.2	62.1	413.4	70.6	439.7	68.2	384.5
572	Household appliance stores	90.1	15.4	82.6	12.5	83.1	14.2	74.6	13.2	87.0	14.9	86.9	13.5	83.6
573	Radio, TV, and music stores	157.2	26.9	148.2	22.4	147.6	25.3	161.9	28.6	234.6	40.0	260.8	40.4	183.6
591	Drug stores and proprietary stores	508.5	87.0	507.5	76.6	487.0	83.3	491.6	86.9	566.0	96.6	563.5	87.3	517.8
592	Liquor stores	134.5	23.0	132.4	20.0	128.9	22.1	126.9	22.4	126.1	21.5	129.5	20.1	129.1
594	Miscellaneous shopping goods stores	571.7	97.8	599.7	90.5	631.8	108.1	636.3	112.5	734.8	125.4	758.8	117.6	652.0
596	Nonstore retailers	276.1	47.2	273.9	41.3	276.9	47.4	256.0	45.3	262.4	44.8	259.1	40.2	266.2
598	Fuel and ice dealers	102.5	17.5	107.0	16.1	104.3	17.8	99.9	17.7	109.4	18.7	112.3	17.4	105.3
599	Retail stores n.e.c.	244.6	41.9	250.3	37.8	268.7	46.0	260.7	46.1	347.1	59.2	355.2	55.1	286.0
602	Commercial and stock savings banks	1358.4	232.4	1411.9	213.1	1480.5	253.3	1506.9	266.4	1556.1	265.6	1582.5	245.3	1476.1
603	Mutual savings banks (1)	68.3	11.7	71.0	10.7	74.5	12.8	76.2	13.5	78.7	13.4	84.0	13.0	75.1

Appendix B (Cont.)

Numbers in thousands

SIC	INDUSTRY	1979		1980		1981		1983		1985		1986		Sum
		US	States	US	States	US	States	US	States	US	States	US	States	
612	Savings and loan associations	237.6	40.7	243.5	36.7	257.6	44.1	293.0	51.8	346.8	59.2	375.5	58.2	290.7
614	Personal credit institutions	210.6	36.0	209.8	31.7	197.2	33.7	195.8	34.6	217.5	37.1	230.8	35.8	209.0
615	Business credit institutions (1)	35.9	6.1	36.7	5.5	37.9	6.5	40.2	7.1	49.6	8.5	54.3	8.4	42.2
616	Mortgage bankers and brokers (1)	86.9	14.9	88.8	13.4	91.5	15.7	97.2	17.2	119.9	20.5	155.9	24.2	105.7
621	Security brokers and dealers	164.8	28.2	169.6	25.6	201.4	34.5	248.2	43.9	286.1	48.8	308.4	47.8	228.8
631	Life insurance	523.5	89.6	539.8	81.5	535.3	91.6	538.9	95.3	537.8	91.8	558.0	86.5	536.2
632	Medical service and health insurance	137.9	23.6	140.7	21.2	144.3	24.7	145.4	25.7	166.9	28.5	180.8	28.0	151.7
633	Fire, marine, and casualty insurance	476.7	81.6	490.5	74.0	484.4	82.9	469.4	83.0	474.4	81.0	495.1	74.0	479.2
636	Title insurance (1)	45.6	7.8	46.6	7.0	46.5	8.0	46.3	8.2	47.4	8.1	57.5	8.9	48.0
651	Real estate operators and lessors	436.9	74.8	468.2	70.7	477.8	81.8	500.4	88.5	504.7	86.2	516.8	80.1	481.9
653	Real estate agents and managers	347.3	59.4	376.9	56.9	390.1	66.7	363.0	64.2	448.1	76.5	499.6	77.4	401.2
655	Subdividers and developers	131.8	22.6	133.8	20.2	140.6	24.1	119.1	21.1	136.5	23.3	151.3	23.5	134.6
701	Hotels, motels, and tourist courts	989.2	169.3	1027.7	155.1	1061.2	181.6	1080.1	191.0	1323.7	226.0	1325.8	205.5	1128.3
721	Laundry, cleaning, and garment services	353.7	60.5	354.7	53.5	354.3	60.6	346.6	61.3	383.6	65.5	397.9	61.7	363.1
722	Photographic studios, portrait (1)	43.1	7.4	44.7	6.7	42.9	7.3	45.0	8.0	54.0	9.2	55.8	8.6	47.3
723	Beauty shops	277.5	47.5	294.5	44.4	285.7	48.9	297.4	52.6	351.1	59.9	350.3	54.3	307.6
726	Funeral service and crematories	71.7	12.3	70.7	10.7	72.5	12.4	72.2	12.8	75.4	12.9	76.4	11.8	72.8
731	Advertising	147.3	25.2	148.5	22.4	156.1	26.7	166.9	29.5	192.2	32.8	192.9	29.9	166.5
732	Credit reporting and collection	75.6	12.9	71.9	10.8	71.7	12.3	78.9	13.9	89.3	15.2	97.9	15.2	80.4
733	Mailing, reproduction, and stenographic	105.0	18.0	122.6	18.5	129.2	22.1	143.3	25.3	180.0	30.7	203.2	31.5	146.1
734	Services to buildings	481.9	82.5	505.9	76.3	516.4	88.4	543.5	96.1	660.8	112.8	705.0	109.3	565.3
736	Personnel supply services	487.4	83.4	517.9	78.2	604.4	103.4	714.4	126.3	921.9	157.4	1013.9	157.2	705.8
737	Computer and data processing services	257.6	44.1	292.8	44.2	344.2	58.9	400.1	70.7	544.0	92.9	584.2	90.6	401.3
739	Miscellaneous business services (1)	1450.0	248.1	1483.0	223.8	1468.8	251.3	1492.2	263.8	1856.5	316.9	2003.3	310.5	1614.4
751	Automotive rentals, without drivers (1)	111.1	19.0	113.6	17.1	112.5	19.2	114.3	20.2	142.2	24.3	164.1	25.4	125.3
753	Automotive repair shops	356.7	61.0	356.9	53.9	354.5	60.7	364.9	64.5	455.4	77.7	460.5	71.4	389.2
762	Electrical repair shops (1)	81.8	14.0	89.9	13.6	87.2	14.9	79.8	14.1	98.9	16.9	104.6	16.2	89.7
781	Motion picture production and services	77.8	13.3	76.0	11.5	73.7	12.6	86.1	15.2	100.9	17.2	106.7	16.5	86.4
783	Motion picture theaters	124.5	21.3	126.9	19.1	128.9	22.1	112.4	19.9	106.9	18.2	102.2	15.8	116.5
801	Offices of physicians	714.6	122.3	756.0	114.1	782.5	133.9	856.5	151.4	967.3	165.1	1014.5	157.2	844.0
802	Offices of dentists	315.8	54.0	341.9	51.6	356.0	60.9	408.4	72.2	443.8	75.8	459.0	71.1	385.6
805	Nursing and personal care facilities	978.8	167.5	995.3	150.2	1049.1	179.5	1097.9	194.1	1201.6	205.1	1284.5	199.1	1095.5
806	Hospitals	2647.5	453.0	2721.5	410.7	2884.3	493.5	3026.9	535.2	2964.2	506.0	3042.9	471.6	2870.0
807	Medical and dental laboratories (1)	91.5	15.6	94.9	14.3	100.4	17.2	107.9	19.1	113.7	19.4	129.1	20.0	105.6
808	Outpatient care facilities (1)	171.9	29.4	178.3	26.9	188.7	32.3	202.8	35.9	213.7	36.5	244.2	37.9	198.8
821	Elementary and secondary schools	231.5	39.6	266.6	40.2	292.2	50.0	318.4	56.3	359.0	61.3	383.6	59.5	306.9
822	Colleges and universities	708.0	121.1	729.0	110.0	728.5	124.6	761.1	134.6	780.8	133.3	851.0	131.9	755.5
824	Correspondence and vocational schools (1)	51.6	8.8	54.7	8.2	55.9	9.6	59.1	10.4	62.3	10.6	67.5	10.5	58.2
832	Individual and family services (1)	215.3	36.8	237.0	35.8	244.1	41.8	258.1	45.6	275.4	47.0	283.7	44.0	251.0
833	Job training and related services (1)	161.8	27.7	178.0	26.9	183.4	31.4	193.9	34.3	206.9	35.3	216.5	33.6	189.1
836	Residential care (1)	223.2	38.2	245.6	37.1	252.9	43.3	267.4	47.3	285.4	48.7	309.7	48.0	262.5
861	Business associations (1)	93.0	15.9	92.6	14.0	93.3	16.0	89.7	15.9	88.7	15.1	90.1	14.0	90.8

Appendix B (Cont.)

Numbers in thousands

SIC	INDUSTRY	1979		1980		1981		1983		1985		1986		Sum
		US	States	US	States	US	States	US	States	US	States	US	States	
863	Labor organizations (1)	146.8	25.1	146.2	22.1	147.4	25.2	141.6	25.0	140.1	23.9	142.4	22.1	143.4
864	Civic and social associations (1)	352.3	60.3	350.7	52.9	353.5	60.5	339.7	60.1	336.1	57.4	337.6	52.3	343.4
891	Engineering and architectural services	509.7	87.2	556.7	84.0	566.8	97.0	574.5	101.6	700.3	119.5	711.3	110.3	599.6
892	Noncommercial research organizations (1)	86.0	14.7	92.2	13.9	95.2	16.3	97.5	17.2	115.0	19.6	121.1	18.8	100.6
893	Accounting, auditing, and bookkeeping	295.9	50.6	315.0	47.5	338.3	57.9	363.0	64.2	416.7	71.1	439.1	68.1	359.4

Table footnotes

- 1 Some numbers in this table appear in italics. They represent the data that have been estimated. Our sources, *Employment and Earnings* and unpublished BLS tables, did not list the data for several industries for the 1979, 1980, 1981, 1983. To estimate these numbers we used the closest available year (1985) and a series of coefficients representing the actual fluctuation for the family of industries to which for a given industry belongs. For example, look at SIC#807, Medical and Dental Laboratories. We could not obtain the exact numbers indicating the employment in that industry for 1979. However, we know this industry belongs to the family SIC #80 Health Services. The data for this family, in 1979, is available. We use it to derive a formula for our estimation.

The Formula: let "a" represent the number (employment) for the family of industries in 1985;
 let "b" represent the number for that family of industries in the year to be estimated;
 let "c" represent the number for this particular industry in 1985;
 Therefore the estimate $e = (b/a) * c$.

Back to our example: "a" represents the employment in Health Services for the year 1985, $a = 6,266.8$ (in thousands);
 "b" represents the employment in Health Services for 1979, $b = 5,040.9$ (in thousands);
 "c" represents the employment in Medical and Dental Laboratories in 1985, $c = 113.7$ (in thousands);
 "e" is the estimated employment for Medical and Dental Laboratories for 1979, $e = 91.46$ (in thousands),
 $e = (5040.9 / 6266.8) * 113.7 = 91.46$.

- 2 A number of employment statistics were provided to the author from the BLS with the proviso that they not be published. These industries included SIC codes 078, 103, 104, 121, 177, 178, 213, 235, 263, 319, 328, 334, 401, 423, 461, 472, 478, 482, 489, 494, 515, 523, 526, 527, 543, 549, 552, 553, 563, 581, 635, 637, 641, 703, 724, 752, 754, 763, 764, 782, 792, 793, 804, 811, 835, 839, 862, 866.

Appendix C

Male and Female Job Deaths within Occupations
Ranked in Descending Order by Rate of Deaths per 100,000 Workers
With Frequencies of Deaths by Type of Accident

<i>Rank</i>	<i>Code</i>	<i>Occupation</i>	<i>Number of Deaths</i>	<i>Rate per 100,000</i>	<i>Types of Accidents</i>
1	546	Stone cutters and carvers 10; Overexertion by wielding, holding, carrying objects 1;	11	297.2170	Contact with radiation or caustics, by inhalation
2	511	Painter apprentices	1	118.4834	Fall from scaffold, etc. 1;
3	761	Lumbermen, raftsmen, etc. Struck by, uns. 6; Struck against moving object 3; Fall from vehicle 2; Struck against stationary object 1; Struck by flying object 1; Fall to lower level, n.e.c. 1; Caught between moving and stationary objects 1; Caught in or under collapsing materials 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1; Accident type, n.e.c. 1; Non classifiable 1;	61	94.9372	Struck by falling object 33; Struck by, n.e.c. 7;
4	710	Motormen; logging, mine, etc. Fall from vehicle 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Accident type, n.e.c. 1;	7	94.2507	Struck by, n.e.c. 2; Struck by falling object 1;
5	163	Airplane pilots Motor vehicle accident, stationary object, uns. 2; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1;	47	89.6348	Aircraft accident 40; Accident type, n.e.c. 3;
6	603	Blasters and powdermen Struck by falling object 1; Struck by, n.e.c. 1;	5	84.8752	Contact with radiation or caustics, by inhalation
7	780	Miscellaneous laborers Struck by, n.e.c. 15; Contact with electric current 7; Non classifiable 7; Caught in, under, between, n.e.c. 6; Contact with temp. extremes, hot objects 6; Struck by falling object 5; Fall to lower level, n.e.c. 5; Caught in or under collapsing materials 5; Overexertion by lifting objects 5; Overexertion by wielding, holding, carrying objects 5; Accident type, n.e.c. 5; Explosions, uns. 4; Motor vehicle accident, struck while standing in roadway 3; Struck by, uns. 2; Struck by flying object 2; Fall from vehicle 2; Caught between moving and stationary objects 2; Overexertion by pulling or pushing objects 2; Motor vehicle accident, uns. 2; Motor vehicle accident, non collision, overturned 2; Motor vehicle accident, other non collision 2; Fall from scaffold, etc. 1; Fall into shaft, etc. 1; Fall onto walkway, etc. 1; Fall onto or against objects 1; Caught in, under, between, uns. 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, stationary object, uns. 1;	120	76.1648	Struck by, n.e.c. 18; Contact with radiation or caustics, by inhalation 15; Non classifiable 7; Caught in, under, between, n.e.c. 6; Contact with temp. extremes, hot objects 6; Struck by falling object 5; Fall to lower level, n.e.c. 5; Caught in or under collapsing materials 5; Overexertion by lifting objects 5; Overexertion by wielding, holding, carrying objects 5; Accident type, n.e.c. 5; Explosions, uns. 4; Motor vehicle accident, struck while standing in roadway 3; Struck by, uns. 2; Struck by flying object 2; Fall from vehicle 2; Caught between moving and stationary objects 2; Overexertion by pulling or pushing objects 2; Motor vehicle accident, uns. 2; Motor vehicle accident, non collision, overturned 2; Motor vehicle accident, other non collision 2; Fall from scaffold, etc. 1; Fall into shaft, etc. 1; Fall onto walkway, etc. 1; Fall onto or against objects 1; Caught in, under, between, uns. 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, stationary object, uns. 1;
8	704	Urban rail conductors 1; Streetcar or subway accident 1;	4	72.2282	Struck by, n.e.c. 2; Contact with electric current
9	763	Teamsters standing vehicle on side of road 1;	2	66.3130	Struck by, n.e.c. 1; Motor vehicle accident,
10	601	Asbestos workers 16; Contact with radiation or caustics by absorption 3; Fall from scaffold, etc. 1; Fall to lower level, n.e.c. 1;	21	61.1995	Contact with radiation or caustics, by inhalation
11	605	Surveying assistants Struck by, n.e.c. 1; Motor vehicle accident, uns. 1; Accident type, n.e.c. 1;	5	55.9534	Motor vehicle accident, both in motion, uns. 2;
12	614	Drillers, earth radiation or caustics, by inhalation 3; Struck by falling object 2; Caught in, under, between, n.e.c. 2; Struck against stationary object 1; Struck against moving object 1; Struck by, uns. 1; Struck by, n.e.c. 1; Fall onto walkway, etc. 1; Aircraft accident 1; Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, uns. 1; Motor vehicle accident, non collision, overturned 1;	20	54.5345	Contact with electric current 4; Contact with
13	961	Firemen and fire protection Overexertion, n.e.c. 2; Motor vehicle accident, both in motion, uns. 2; Motor vehicle accident, other non collision 2; Struck by falling object 1; Struck by flying object 1; Fall to lower level, n.e.c. 1; Contact with electric current 1; Contact with temp. extremes, general heat 1; Motor vehicle accident, stationary object in roadway 1;	77	51.3816	Accident type, n.e.c. 18; Contact with radiation or caustics, by inhalation 11; Non classifiable 6; Struck by, n.e.c. 5; Overexertion by wielding, holding, carrying objects 5; Contact with temp. extremes, hot objects 5; Caught in or under collapsing materials 4; Motor vehicle accident, uns. 4; Fall onto walkway, etc. 3; Fall from vehicle 2; Bodily reaction -- voluntary motions 2;
14	550	Structural metal craftsmen etc. 4; Contact with electric current 3; Struck by falling object 2; Overexertion by wielding, holding, carrying objects 2; Accident type, n.e.c. 2; Struck against stationary object 1; Struck by flying object 1; Fall from elevation, uns. 1; Fall into shaft, etc. 1; Caught in or under collapsing materials 1; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics by absorption 1;	27	49.8431	Fall to lower level, n.e.c. 6; Fall from scaffold, etc. 4; Contact with electric current 3; Struck by falling object 2; Overexertion by wielding, holding, carrying objects 2; Accident type, n.e.c. 2; Struck against stationary object 1; Struck by flying object 1; Fall from elevation, uns. 1; Fall into shaft, etc. 1; Caught in or under collapsing materials 1; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics by absorption 1;
15	433	Electric power linemen level, n.e.c. 8; Accident type, n.e.c. 2; Fall from elevation, uns. 1; Caught between moving and stationary objects 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, stationary object in roadway 1; Explosions, uns. 1;	34	44.3494	Contact with electric current 18; Fall to lower
16	754	Garbage collectors n.e.c. 3; Fall from vehicle 2; Struck by falling object 1; Fall into shaft, etc. 1;	19	40.4161	Struck by, n.e.c. 6; Caught in, under, between,

Appendix C (Cont.)

<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
16	754 Garbage collectors (Cont)			Caught between moving and stationary objects 1; Overexertion by lifting objects 1; Motor vehicle accident, struck while standing off roadway 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1; Non classifiable 1;
17	640 Miners, n.e.c.	59	39.7042	Contact with radiation or caustics, by inhalation 19; Struck by falling object 11; Caught in or under collapsing materials 8; Explosions, uns. 4; Struck by, n.e.c. 3; Motor vehicle accident, both in motion, uns. 2; Struck against, uns. 1; Struck against moving object 1; Struck by, uns. 1; Fall from elevation, uns. 1; Fall into shaft, etc. 1; Fall to lower level, n.e.c. 1; Caught between moving and stationary objects 1; Caught between two or more moving objects 1; Contact with electric current 1; Contact with radiation or caustics, n.e.c. 1; Aircraft accident 1; Non classifiable 1;
18	173 Technicians, n.e.c.	7	39.5302	Overexertion by welding, holding, carrying objects 2; Contact with temp. extremes, hot objects 2; Caught in, under, between, n.e.c. 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, uns. 1;
19	495 Not specified mechanics	26	39.1743	Accident type, n.e.c. 4; Overexertion by lifting objects 3; Contact with temp. extremes, hot objects 3; Fall to lower level, n.e.c. 2; Contact with electric current 2; Contact with radiation or caustics, by inhalation 2; Struck by flying object 1; Fall from vehicle 1; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Bodily reaction, uns. 1; Bodily reaction -- involuntary motions 1; Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, ran off roadway 1; Explosions, uns. 1; Non classifiable 1;
20	943 Elevator operators	4	39.0092	Struck by falling object 1; Fall into shaft, etc. 1; Fall onto walkway, etc. 1; Caught in, under, between, uns. 1;
21	715 Truck drivers	489	38.7590	Motor vehicle accident, non collision, overturned 60; Motor vehicle accident, non collision, ran off roadway 50; Motor vehicle accident, uns. 37; Struck by, n.e.c. 36; Accident type, n.e.c. 28; Motor vehicle accident, standing vehicle on side of road 25; Overexertion by welding, holding, carrying objects 24; Motor vehicle accident, both in motion, oncoming 21; Motor vehicle accident, both in motion, uns. 20; Struck by falling object 19; Motor vehicle accident, stationary object in roadway 14; Motor vehicle accident, vehicles moving in intersection 13; Contact with electric current 12; Overexertion by lifting objects 11; Caught between moving and stationary objects 10; Overexertion, n.e.c. 10; Motor vehicle accident, both in motion, same direction 10; Fall from vehicle 8; Contact with temp. extremes, hot objects 8; Contact with radiation or caustics, by inhalation 8; Motor vehicle accident, non collision, uns. 8; Non classifiable 8; Caught in, under, between, n.e.c. 6; Motor vehicle accident, other non collision 6; Struck by flying object 4; Fall onto walkway, etc. 4; Overexertion by pulling or pushing objects 4; Motor vehicle accident, stationary object, uns. 3; Motor vehicle accident, struck while standing in roadway 3; Explosions, uns. 3; Fall into shaft, etc. 2; Fall to lower level, n.e.c. 2; Motor vehicle accident, non collision, sudden stop or start 2; Struck against stationary object 1; Struck by, uns. 1; Fall from ladder 1; Fall on stairs 1; Caught in, under, between, uns. 1; Caught in running or meshing objects 1; Caught in or under collapsing materials 1; Bodily reaction -- involuntary motions 1; Contact with radiation or caustics, by ingestion 1; Aircraft accident 1;
22	714 Taxi drivers and chauffeurs	40	37.2266	Struck by flying object 15; Motor vehicle accident, both in motion, uns. 4; Struck by, n.e.c. 3; Motor vehicle accident, uns. 3; Overexertion by welding, holding, carrying objects 2; Motor vehicle accident, standing vehicle on side of road 2; Accident type, n.e.c. 2; Caught between moving and stationary objects 1; Caught between two or more moving objects 1; Rubbed or abraded by objects handled 1; Overexertion, uns. 1; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, ran off roadway 1;
23	404 Boltermakers	9	37.0950	Fall to lower level, n.e.c. 2; Contact with electric current 2; Contact with radiation or caustics, by inhalation 2; Fall into shaft, etc. 1; Contact with temp. extremes, hot objects 1; Accident type, n.e.c. 1;
24	491 Mechanic, except auto	2	35.0693	Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, uns. 1;
25	751 Construction laborers	173	32.8919	Struck by, n.e.c. 22; Caught in or under collapsing materials 21; Contact with radiation or caustics, by inhalation 15; Contact with electric current 14; Struck by falling object 11; Fall to lower level, n.e.c. 11; Overexertion by welding, holding, carrying objects 11; Fall from scaffold, etc. 7; Fall into shaft, etc. 6; Accident type, n.e.c. 6; Fall from vehicle 5; Contact with temp. extremes, hot objects 5; Caught in, under, between, n.e.c. 4; Overexertion by lifting objects 4; Contact with temp. extremes, general heat 3; Non classifiable 3; Struck against stationary object 2; Struck by flying object 2; Fall from elevation, uns. 2; Caught between moving and stationary objects 2; Motor vehicle accident, both in motion, oncoming 2; Motor vehicle accident, non collision, overturned 2; Motor vehicle accident, non collision, ran off roadway 2; Explosions, uns. 2; Struck against moving object 1; Fall onto walkway, etc. 1; Bodily reaction, uns. 1; Bodily reaction -- involuntary motions 1; Overexertion by pulling or pushing objects 1; Train accident 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, uns. 1;
26	523 Plumber apprentices	3	32.7261	Contact with electric current 1; Contact with radiation or caustics, n.e.c. 1; Accident type, n.e.c. 1;
27	821 Farm foremen	7	32.4871	Struck by, n.e.c. 3; Struck by flying object 1; Fall from scaffold, etc. 1; Caught between moving and stationary objects 1; Contact with temp. extremes, hot objects 1;
28	084 Therapy assistants	2	31.5259	Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics by absorption 1;

Appendix C (Cont.)

<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
29 642	Greasers, except auto	8	30.7385	Caught in or under collapsing materials 2; Fall onto walkway, etc. 1; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Overexertion by pulling or pushing objects 1; Contact with electric current 1; Accident type, n.e.c. 1;
30 536	Sheetmetal apprentices	1	29.6209	Fall into shaft, etc. 1;
31 785	Not specified laborers	61	28.4266	Struck by, n.e.c. 8; Struck by falling object 6; Overexertion by lifting objects 5; Overexertion by welding, holding, carrying objects 5; Contact with radiation or caustics, by inhalation 4; Accident type, n.e.c. 4; Fall from ladder 3; Caught in or under collapsing materials 3; Caught in, under, between, n.e.c. 3; Motor vehicle accident, uns. 3; Non classifiable 3; Struck against moving object 2; Caught between moving and stationary objects 2; Contact with electric current 2; Contact with temp. extremes, hot objects 2; Fall from scaffold, etc. 1; Fall onto walkway, etc. 1; Fall onto or against objects 1; Overexertion by pulling or pushing objects 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, uns. 1;
32 412	Bulldozer operators	20	28.3897	Overexertion by welding, holding, carrying objects 3; Motor vehicle accident, non collision, overturned 3; Struck by falling object 2; Fall from vehicle 2; Accident type, n.e.c. 2; Non classifiable 2; Struck by flying object 1; Struck by, n.e.c. 1; Caught in, under, between, uns. 1; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Overexertion, n.e.c. 1;
33 965	Sheriffs and bailiffs	13	27.9420	Accident type, n.e.c. 3; Struck by flying object 2; Struck by, n.e.c. 2; Motor vehicle accident, uns. 2; Struck against stationary object 1; Aircraft accident 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, non collision, ran off roadway 1;
34 503	Molders, metal	9	26.0718	Contact with radiation or caustics, by inhalation 6; Struck by flying object 1; Contact with temp. extremes, hot objects 1; Accident type, n.e.c. 1;
35 671	Knitters, loopers, etc.	4	25.3904	Fall into shaft, etc. 2; Contact with radiation or caustics, by inhalation 1; Accident type, n.e.c. 1;
36 203	Buyers, farm products	3	24.3883	Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, overturned 1; Explosions, uns. 1;
37 666	Stationary firemen	11	23.2470	Contact with radiation or caustics, by inhalation 3; Struck by, n.e.c. 2; Overexertion by lifting objects 2; Struck against stationary object 1; Fall to lower level, n.e.c. 1; Explosions, uns. 1; Non classifiable 1;
38 551	Tailors objects 2;	4	22.6616	Struck by, n.e.c. 2; Overexertion by lifting object 1;
39 431	Electrician apprentices	4	22.0507	Contact with electric current 3; Struck by flying object 1;
40 436	Excavating machine operators	62	21.5757	Struck by, n.e.c. 10; Struck by falling object 6; Fall to lower level, n.e.c. 5; Motor vehicle accident, non collision, overturned 5; Caught in or under collapsing materials 4; Caught in, under, between, n.e.c. 4; Contact with radiation or caustics, by inhalation 4; Caught between moving and stationary objects 3; Contact with electric current 3; Accident type, n.e.c. 3; Non classifiable 3; Motor vehicle accident, uns. 2; Motor vehicle accident, both in motion, oncoming 2; Struck by, uns. 1; Fall from piled materials 1; Fall from vehicle 1; Fall onto walkway, etc. 1; Overexertion by pulling or pushing objects 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, non collision, ran off roadway 1;
41 963	Marshals and constables	1	20.5128	Contact with radiation or caustics, by inhalation 1;
42 492	Miscellaneous mechanics	34	20.3503	Struck by, n.e.c. 5; Fall to lower level, n.e.c. 4; Overexertion by welding, holding, carrying objects 4; Motor vehicle accident, non collision, overturned 3; Struck by falling object 2; Fall from ladder 2; Overexertion by lifting objects 2; Contact with temp. extremes, hot objects 2; Fall into shaft, etc. 1; Caught between moving and stationary objects 1; Overexertion by pulling or pushing objects 1; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics by absorption 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, struck while standing in roadway 1; Accident type, n.e.c. 1; Non classifiable 1;
43 051	Geologists	6	19.3013	Aircraft accident 2; Motor vehicle accident, non collision, overturned 2; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1;
44 802	Farm managers	5	19.2901	Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, non collision, overturned 2; Caught in running or meshing objects 1;
45 695	Not specified operatives	22	18.3425	Contact with radiation or caustics, by inhalation 4; Contact with temp. extremes, hot objects 3; Explosions, uns. 3; Caught between moving and stationary objects 2; Struck by, n.e.c. 1; Fall from ladder 1; Fall into shaft, etc. 1; Fall onto walkway, etc. 1; Fall on same level, n.e.c. 1; Overexertion by lifting objects 1; Contact with electric current 1; Contact with radiation or caustics by absorption 1; Motor vehicle accident, both in motion, uns. 1; Non classifiable 1;
46 534	Roofers and slaters	17	18.2071	Fall to lower level, n.e.c. 5; Struck by falling object 2; Fall from ladder 2; Motor vehicle accident, both in motion, oncoming 2; Struck by, n.e.c. 1; Fall from scaffold, etc. 1; Fall from vehicle 1; Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1;
47 964	Policemen and detectives	61	18.0923	Struck by flying object 16; Accident type, n.e.c. 12; Struck by, n.e.c. 9; Motor vehicle accident, non collision, ran off roadway 3; Fall onto walkway, etc. 2; Aircraft accident 2; Motor vehicle accident, uns. 2; Motor vehicle accident, vehicles moving in intersection 2; Motor vehicle accident, standing vehicle on side of road 2; Struck against stationary object 1; Fall on same level, n.e.c. 1; Overexertion by lifting objects 1; Overexertion, n.e.c. 1; Contact with radiation or caustics, by ingestion 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, oncoming 1;

Appendix C (Cont.)

<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
47	964 Policemen and detectives (Cont)			Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, other non collision 1; Non classifiable 1;
48	424 Crane and derrick operators	17	17.6811	Struck by falling object 4; Caught in, under, between, n.e.c. 3; Struck by, n.e.c. 2; Fall to lower level, n.a.c. 2; Motor vehicle accident, uns. 2; Struck by flying object 1; Fall from vehicle 1; Contact with electric current 1; Accident type, n.e.c. 1;
49	020 Mining engineers	1	17.4611	Struck by flying object 1;
50	502 Millwrights	12	17.4029	Caught between moving and stationary objects 2; Contact with radiation or caustics, by inhalation 2; Struck by, uns. 1; Struck by falling object 1; Struck by, n.e.c. 1; Fall from ladder 1; Fall from vehicle 1; Caught in, under, between, n.e.c. 1; Overexertion by lifting objects 1; Contact with electric current 1;
51	750 Carpenters' helpers	7	17.2240	Struck by falling object 1; Struck by, n.e.c. 1; Fall from elevation, uns. 1; Fall into shaft, etc. 1; Caught between moving and stationary objects 1; Overexertion by welding, holding, carrying objects 1; Contact with temp. extremes, general heat 1;
52	705 Deliverymen and routemen	64	16.6338	Overexertion by welding, holding, carrying objects 8; Motor vehicle accident, uns. 7; Struck by flying object 6; Motor vehicle accident, both in motion, uns. 6; Overexertion by pulling or pushing objects 5; Overexertion by lifting objects 4; Motor vehicle accident, non collision, ran off roadway 4; Accident type, n.e.c. 4; Motor vehicle accident, standing vehicle on side of road 3; Motor vehicle accident, both in motion, oncoming 2; Motor vehicle accident, vehicles moving in intersection 2; Non classifiable 2; Struck by falling object 1; Fall from vehicle 1; Fall on stairs 1; Fall onto or against objects 1; Overexertion, uns. 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, uns. 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, other non collision 1;
53	571 Craft workers, n.a.c.	7	15.7441	Fall to lower level, n.e.c. 2; Struck against stationary object 1; Fall onto walkway, etc. 1; Contact with electric current 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1;
54	931 Airline stewardesses	5	15.7025	Aircraft accident 3; Transportation accident, not motor vehicle, uns. 2;
55	535 Sheetmetal workers	16	15.4108	Fall to lower level, n.e.c. 3; Contact with electric current 2; Motor vehicle accident, both in motion, oncoming 2; Non classifiable 2; Struck by falling object 1; Fall from elevation, uns. 1; Fall from scaffold, etc. 1; Fall from ladder 1; Fall into shaft, etc. 1; Caught between moving and stationary objects 1; Overexertion by welding, holding, carrying objects 1;
56	662 Sawyers	12	15.0028	Caught in running or meshing objects 3; Struck by, uns. 2; Struck by flying object 2; Struck against moving object 1; Struck by falling object 1; Struck by, n.e.c. 1; Caught in, under, between, n.e.c. 1; Contact with electric current 1;
57	635 Metal platers	3	14.6542	Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics by absorption 1; Contact with radiation or caustics, n.e.c. 1;
58	435 Engravers, except photo	1	14.1743	Contact with radiation or caustics, by inhalation 1;
59	402 Bakers	13	13.6975	Contact with radiation or caustics, by inhalation 4; Overexertion by lifting objects 3; Overexertion by welding, holding, carrying objects 2; Struck by flying object 1; Fall on stairs 1; Accident type, n.e.c. 1; Non classifiable 1;
60	694 Miscellaneous operatives	69	13.4401	Contact with radiation or caustics, by inhalation 12; Struck by, n.e.c. 6; Fall onto walkway, etc. 6; Overexertion by welding, holding, carrying objects 5; Accident type, n.e.c. 5; Contact with temp. extremes, hot objects 4; Fall from ladder 3; Non classifiable 3; Struck by falling object 2; Fall from scaffold, etc. 2; Caught in running or meshing objects 2; Overexertion by lifting objects 2; Contact with electric current 2; Motor vehicle accident, both in motion, oncoming 2; Explosions, uns. 2; Struck against moving object 1; Struck by, uns. 1; Fall to lower level, n.e.c. 1; Rubbed or abraded by repetition of pressure 1; Overexertion, n.e.c. 1; Contact with radiation or caustics by absorption 1; Aircraft accident 1; Motor vehicle accident, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, overturned 1;
61	522 Plumbers and pipe fitters	40	13.0768	Overexertion by welding, holding, carrying objects 9; Contact with radiation or caustics, by inhalation 8; Caught in or under collapsing materials 5; Accident type, n.e.c. 3; Fall from ladder 2; Struck against stationary object 1; Struck by, uns. 1; Struck by flying object 1; Fall from scaffold, etc. 1; Fall from vehicle 1; Fall into shaft, etc. 1; Bodily reaction, uns. 1; Overexertion by lifting objects 1; Contact with electric current 1; Contact with radiation or caustics by absorption 1; Motor vehicle accident, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, ran off roadway 1;
62	623 Gas station attendants	30	13.0524	Struck by flying object 13; Accident type, n.e.c. 3; Struck by, n.e.c. 2; Caught between moving and stationary objects 2; Contact with temp. extremes, hot objects 2; Motor vehicle accident, non collision, overturned 2; Struck against moving object 1; Fall onto walkway, etc. 1; Caught between two or more moving objects 1; Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1; Non classifiable 1;
63	030 Judges	2	12.9400	Accident type, n.e.c. 2;
64	442 Forgemen and hammermen	1	12.7065	Non classifiable 1;
65	622 Furnace and smelter operators	5	12.5739	Contact with radiation or caustics, by inhalation 2; Struck by falling object 1; Struck by, n.e.c. 1; Overexertion by welding, holding, carrying objects 1;
66	520 Plasterers	2	11.8547	Fall into shaft, etc. 1; Overexertion by pulling or pushing objects 1;

Appendix C (Cont.)

<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
67	213 Construction Inspectors	2	11.8245	Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, stationary object in roadway 1;
68	441 Foremen	137	11.7197	Struck by, n.e.c. 16; Contact with radiation or caustics, by inhalation 13; Accident type, n.e.c. 12; Fall to lower level, n.e.c. 11; Struck by falling object 9; Contact with electric current 9; Overexertion by welding, holding, carrying objects 6; Overexertion by lifting objects 5; Contact with temp. extremes, hot objects 5; Caught in or under collapsing materials 4; Motor vehicle accident, uns. 4; Motor vehicle accident, non collision, overturned 4; Struck by flying object 3; Fall from scaffold, etc. 3; Overexertion by pulling or pushing objects 3; Contact with radiation or caustics by absorption 3; Motor vehicle accident, vehicles moving in intersection 3; Motor vehicle accident, struck while standing in roadway 3; Non classifiable 3; Fall into shaft, etc. 2; Caught in, under, between, uns. 2; Aircraft accident 2; Motor vehicle accident, both in motion, same direction 2; Struck against stationary object 1; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Overexertion, n.e.c. 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, uns. 1; Motor vehicle accident, non collision, ran off roadway 1;
69	416 Carpenter apprentices	1	11.7014	Fall to lower level, n.e.c. 1;
70	822 Farm laborers, wage workers	73	11.5308	Caught in, under, between, n.e.c. 10; Contact with radiation or caustics, by inhalation 7; Struck by, n.e.c. 6; Contact with electric current 6; Accident type, n.e.c. 6; Motor vehicle accident, non collision, overturned 4; Non classifiable 4; Struck by falling object 3; Motor vehicle accident, uns. 3; Fall to lower level, n.e.c. 2; Fall onto walkway, etc. 2; Fall onto or against objects 2; Caught in, under, between, uns. 2; Caught between moving and stationary objects 2; Motor vehicle accident, non collision, ran off roadway 2; Struck against stationary object 1; Struck by, uns. 1; Fall from ladder 1; Fall from vehicle 1; Caught in running or meshing objects 1; Caught between two or more moving objects 1; Caught in or under collapsing materials 1; Overexertion by welding, holding, carrying objects 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, struck while standing in roadway 1;
71	483 Loom fixers	1	11.4456	Contact with electric current 1;
72	510 Painters, construction	35	11.0220	Fall from scaffold, etc. 11; Fall from ladder 5; Fall to lower level, n.e.c. 5; Struck by, n.e.c. 2; Fall onto walkway, etc. 2; Overexertion by pulling or pushing objects 2; Overexertion by welding, holding, carrying objects 2; Contact with radiation or caustics, by inhalation 2; Accident type, n.e.c. 2; Contact with electric current 1; Contact with radiation or caustics by absorption 1;
73	962 Guards and watchmen	44	10.8647	Struck by flying object 18; Struck by, n.e.c. 4; Overexertion by welding, holding, carrying objects 3; Fall onto walkway, etc. 2; Contact with radiation or caustics, by inhalation 2; Accident type, n.e.c. 2; Non classifiable 2; Struck by falling object 1; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Caught between two or more moving objects 1; Caught in, under, between, n.e.c. 1; Overexertion, n.e.c. 1; Contact with electric current 1; Motor vehicle accident, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, ran off roadway 1; Exposure to noise, uns. 1;
74	231 Sales managers	25	10.7500	Struck by flying object 9; Struck by, n.e.c. 4; Overexertion by welding, holding, carrying objects 4; Motor vehicle accident, both in motion, uns. 2; Exposure to noise, uns. 2; Fall into shaft, etc. 1; Overexertion by pulling or pushing objects 1; Motor vehicle accident, uns. 1; Accident type, n.e.c. 1;
75	932 Recreation attendants	12	10.6667	Contact with radiation or caustics, by inhalation 4; Motor vehicle accident, uns. 3; Struck by falling object 1; Caught between moving and stationary objects 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, n.e.c. 1; Accident type, n.e.c. 1;
76	154 Industrial engineering technicians	1	10.6281	Aircraft accident 1;
77	452 Inspectors	10	10.5919	Accident type, n.e.c. 4; Struck by falling object 1; Overexertion by lifting objects 1; Contact with electric current 1; Contact with radiation or caustics by absorption 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, struck while standing in roadway 1;
78	770 Warehousemen	19	10.4785	Overexertion by lifting objects 4; Struck by, n.e.c. 3; Caught in, under, between, n.e.c. 3; Struck by falling object 2; Overexertion by welding, holding, carrying objects 2; Overexertion, n.e.c. 1; Contact with temp. extremes, general heat 1; Contact with radiation or caustics, by inhalation 1; Explosions, uns. 1; Accident type, n.e.c. 1;
79	333 Messengers and office boys	7	10.3950	Struck by flying object 2; Struck by, n.e.c. 2; Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, oncoming 1;
80	392 Weighers	3	10.3420	Overexertion by pulling or pushing objects 1; Contact with radiation or caustics, by inhalation 1; Explosions, uns. 1;
81	453 Jewelers and watchmakers	3	10.2072	Struck by flying object 1; Overexertion by lifting objects 1; Motor vehicle accident, uns. 1;
82	430 Electricians	43	9.8940	Contact with electric current 10; Overexertion by welding, holding, carrying objects 6; Struck by, n.e.c. 5; Accident type, n.e.c. 3; Struck by flying object 2; Fall from scaffold, etc. 2; Fall from ladder 2; Fall to lower level, n.e.c. 2; Overexertion by lifting objects 2; Contact with radiation or caustics, by inhalation 2; Struck by falling object 1; Fall onto walkway, etc. 1; Caught in or under collapsing materials 1; Caught in, under, between, n.e.c. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, standing vehicle on side of road 1;

Appendix C (Cont.)

<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
83	410 Brickmasons and stonemasons	11	9.8015	Fall from scaffold, etc. 3; Contact with radiation or caustics, by inhalation 3; Struck by falling object 2; Overexertion by wielding, holding, carrying objects 2; Fall to lower level, n.e.c. 1;
84	545 Stationary engineers	12	9.5573	Overexertion by lifting objects 2; Explosions, uns. 2; Accident type, n.e.c. 2; Fall onto walkway, etc. 1; Caught in, under, between, n.e.c. 1; Overexertion by wielding, holding, carrying objects 1; Contact with radiation or caustics by absorption 1; Motor vehicle accident, uns. 1; Non classifiable 1;
85	445 Glaziers	3	9.4985	Contact with radiation or caustics, by inhalation 2; Caught in or under collapsing materials 1;
86	334 Meter readers, utilities caustics, by inhalation 1;	3	9.4274	Struck by, n.e.c. 2; Contact with radiation or
87	641 Mixing operatives	5	9.1993	Contact with radiation or caustics, by inhalation 3; Caught in running or meshing objects 1; Non classifiable 1;
88	140 College teachers, n.e.c.	4	9.1170	Aircraft accident 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Accident type, n.e.c. 1;
89	443 Furniture and wood finishers	2	8.9960	Rubbed or abraded by repetition of pressure 1; Contact with radiation or caustics, by inhalation 1;
90	753 Freight and material handlers	44	8.9138	Struck by falling object 8; Struck by, n.e.c. 7; Accident type, n.e.c. 5; Overexertion by wielding, holding, carrying objects 4; Struck by, uns. 2; Struck by flying object 2; Overexertion by lifting objects 2; Contact with radiation or caustics, by inhalation 2; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Caught in, under, between, uns. 1; Caught between two or more moving objects 1; Overexertion, n.e.c. 1; Contact with temp. extremes, general heat 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, other non collision 1; Explosions, uns. 1; Non classifiable 1;
91	612 Cutting operatives, n.e.c.	15	8.8585	Overexertion by lifting objects 7; Struck by, n.e.c. 2; Contact with radiation or caustics, by inhalation 2; Struck by falling object 1; Fall into shaft, etc. 1; Overexertion by pulling or pushing objects 1; Non classifiable 1;
92	554 Telephone linemen	5	8.8238	Contact with electric current 2; Struck by falling object 1; Fall to lower level, n.e.c. 1; Explosions, uns. 1;
93	201 Assessors and controllers	2	8.2119	Struck by flying object 1; Accident type, n.e.c. 1;
94	651 Grinding machine operative	7	8.1395	Contact with radiation or caustics, by inhalation 5; Struck by, n.e.c. 1; Fall from ladder 1;
95	903 Janitors and sextons	75	8.1389	Overexertion by wielding, holding, carrying objects 19; Struck by flying object 6; Overexertion by lifting objects 6; Fall from ladder 5; Non classifiable 5; Struck by, n.e.c. 4; Accident type, n.e.c. 4; Contact with temp. extremes, hot objects 3; Contact with radiation or caustics, by inhalation 3; Fall on stairs 2; Fall into shaft, etc. 2; Fall to lower level, n.e.c. 2; Caught in or under collapsing materials 2; Overexertion, n.e.c. 2; Struck against stationary object 1; Struck by falling object 1; Fall from scaffold, etc. 1; Fall from vehicle 1; Fall onto walkway, etc. 1; Contact with electric current 1; Contact with radiation or caustics by absorption 1; Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, overturned 1; Explosions, uns. 1;
96	711 Parking attendants	2	8.0509	Struck by flying object 1; Struck by, n.e.c. 1;
97	023 Engineers, n.e.c.	12	8.0304	Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, uns. 2; Struck by, n.e.c. 1; Caught in or under collapsing materials 1; Overexertion by wielding, holding, carrying objects 1; Contact with electric current 1; Aircraft accident 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, stationary object in roadway 1; Accident type, n.e.c. 1;
98	624 Graders and sorters	2	8.0115	Contact with radiation or caustics, by inhalation 1; Explosions, uns. 1;
99	633 Meat cutters, manufacturing	5	7.9297	Overexertion by wielding, holding, carrying objects 2; Fall onto walkway, etc. 1; Fall onto or against objects 1; Non classifiable 1;
100	933 Personal service attendants, n.e.c.	5	7.8767	Struck against moving object 1; Struck by flying object 1; Fall on stairs 1; Overexertion by wielding, holding, carrying objects 1; Explosions, uns. 1;
101	485 Radio and TV mechanics	6	7.6106	Overexertion by lifting objects 1; Overexertion by wielding, holding, carrying objects 1; Contact with electric current 1; Contact with temp. extremes, general cold 1; Accident type, n.e.c. 1; Non classifiable 1;
102	621 Flers, polishers, sanders	6	7.5158	Struck by, n.e.c. 2; Contact with radiation or caustics, by inhalation 2; Caught between moving and stationary objects 1; Overexertion by wielding, holding, carrying objects 1;
103	703 Bus drivers	18	7.5150	Motor vehicle accident, both in motion, uns. 3; Struck by flying object 2; Motor vehicle accident, uns. 2; Motor vehicle accident, both in motion, same direction 2; Caught between two or more moving objects 1; Overexertion by lifting objects 1; Overexertion by wielding, holding, carrying objects 1; Overexertion, n.e.c. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, non collision, ran off roadway 1;
104	660 Riveters and fasteners	1	7.3959	Caught between moving and stationary objects 1;
105	652 Milling machine operatives	5	7.0933	Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Caught in, under, between, n.e.c. 1; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1;

Appendix C (Cont.)

<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
106	042 Agricultural scientists	1	7.0626	Motor vehicle accident, other non collision 1;
107	233 Sales managers, except retail	17	7.0151	Accident type, n.e.c. 3; Struck by flying object 2; Motor vehicle accident, uns. 2; Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics, by ingestion 1; Aircraft accident 1; Motor vehicle accident, both in motion, oncoming 1;
108	415 Carpenters	54	6.9334	Struck by, n.e.c. 9; Fall from scaffold, etc. 7; Overexertion by welding, holding, carrying objects 7; Contact with electric current 5; Fall to lower level, n.e.c. 4; Fall from ladder 3; Caught in or under collapsing materials 3; Overexertion by lifting objects 3; Overexertion, n.e.c. 3; Fall on stairs 2; Struck against moving object 1; Struck by falling object 1; Fall from elevation, uns. 1; Fall onto walkway, etc. 1; Rubbed or abraded by leaning, kneeling, etc. 1; Contact with radiation or caustics, by inhalation 1; Transportation accident, not motor vehicle, n.e.c. 1; Accident type, n.e.c. 1;
109	764 Vehicle and equipment cleaners	8	6.8344	Struck by, n.e.c. 3; Fall on stairs 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, sudden stop or start 1; Explosions, uns. 1;
110	421 Cement and concrete finisher	3	6.6025	Struck by falling object 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, oncoming 1;
111	690 Misc. machine operators	58	6.5539	Contact with radiation or caustics, by inhalation 14; Struck by, n.e.c. 6; Caught in, under, between, n.e.c. 6; Accident type, n.e.c. 4; Non classifiable 4; Overexertion by welding, holding, carrying objects 3; Explosions, uns. 3; Struck by falling object 2; Struck by flying object 2; Caught between moving and stationary objects 2; Contact with electric current 2; Contact with temp. extremes, hot objects 2; Struck against moving object 1; Fall from ladder 1; Fall to lower level, n.e.c. 1; Caught in or under collapsing materials 1; Overexertion by lifting objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, uns. 1;
112	124 Coaches and P.E. teachers	1	6.5108	Motor vehicle accident, both in motion, oncoming 1;
113	960 Crossing guards	2	6.4543	Struck by, n.e.c. 2;
114	755 Gardeners and groundskeepers	28	6.4084	Struck by, n.e.c. 5; Overexertion by welding, holding, carrying objects 5; Struck by falling object 4; Fall to lower level, n.e.c. 2; Overexertion by lifting objects 2; Struck by, uns. 1; Fall into shaft, etc. 1; Fall onto walkway, etc. 1; Caught in or under collapsing materials 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Explosions, uns. 1; Accident type, n.e.c. 1; Non classifiable 1;
115	934 Baggage porters and bellhops	1	6.3291	Struck by, n.e.c. 1;
116	706 Fork lift operators	15	6.1947	Struck by falling object 4; Struck by, n.e.c. 2; Caught between moving and stationary objects 2; Overexertion by welding, holding, carrying objects 2; Struck against stationary object 1; Fall from scaffold, etc. 1; Fall onto walkway, etc. 1; Rubbed or abraded by repetition of pressure 1; Accident type, n.e.c. 1;
117	440 Floor layers, except tile	1	6.1614	Contact with temp. extremes, hot objects 1;
118	053 Physicists and astronomers	1	5.9941	Contact with radiation or caustics by absorption 1;
119	484 Office machine mechanics	3	5.9492	Contact with radiation or caustics by absorption 1; Motor vehicle accident, vehicles moving in intersection 1; Accident type, n.e.c. 1;
120	245 Managers and administrators, n.e.c.	254	5.9419	Struck by flying object 34; Aircraft accident 28; Accident type, n.e.c. 26; Struck by, n.e.c. 22; Overexertion by lifting objects 18; Overexertion by welding, holding, carrying objects 12; Motor vehicle accident, uns. 10; Struck by falling object 9; Motor vehicle accident, both in motion, oncoming 9; Motor vehicle accident, non collision, ran off roadway 9; Contact with radiation or caustics, by inhalation 8; Non classifiable 7; Motor vehicle accident, stationary object, uns. 6; Motor vehicle accident, stationary object in roadway 5; Fall to lower level, n.e.c. 4; Motor vehicle accident, vehicles moving in intersection 4; Struck against stationary object 3; Fall onto or against objects 3; Caught in or under collapsing materials 3; Overexertion by pulling or pushing objects 3; Overexertion, n.e.c. 3; Contact with electric current 3; Motor vehicle accident, both in motion, uns. 3; Motor vehicle accident, standing vehicle on side of road 3; Motor vehicle accident, non collision, overturned 3; Fall from vehicle 2; Contact with temp. extremes, hot objects 2; Motor vehicle accident, both in motion, same direction 2; Fall from scaffold, etc. 1; Fall from ladder 1; Fall onto walkway, etc. 1; Caught in, under, between, n.e.c. 1; Contact with temp. extremes, uns. 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, struck while standing off roadway 1; Motor vehicle accident, other non collision 1; Explosions, uns. 1;
121	413 Cabinetmakers	3	5.7541	Overexertion by lifting objects 2; Contact with radiation or caustics, by inhalation 1;
122	401 Auto accessories installers	1	5.7484	Explosions, uns. 1;
123	045 Chemists	5	5.7076	Contact with radiation or caustics, by inhalation 2; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics by absorption 1; Aircraft accident 1;
124	420 Carpet installers	3	5.5059	Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1; Accident type, n.e.c. 1;
125	315 Vehicle dispatchers	4	5.4786	Overexertion by lifting objects 2; Struck by flying object 1; Overexertion by welding, holding, carrying objects 1;
126	902 Cleaners and charwomen	34	5.4705	Overexertion by welding, holding, carrying objects 5; Fall to lower level, n.e.c. 3; Fall onto walkway, etc. 3; Overexertion, n.e.c. 3; Contact with radiation or caustics, by inhalation 3; Accident type, n.e.c. 3; Struck by flying object 2;

Appendix C (Cont.)

<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
126	902 Cleaners and charwomen (Cont.)			Caught in running or meshing objects 2; Struck against stationary object 1; Struck by, n.e.c. 1; Fall from scaffold, etc. 1; Fall from ladder 1; Fall from vehicle 1; Fall into shaft, etc. 1; Caught in, under, between, n.e.c. 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, non collision, ran off roadway 1; Explosions, uns. 1;
127	266 Newsboys	4	5.4594	Struck by, n.e.c. 3; Motor vehicle accident, uns. 1;
128	473 Automobile mechanics	38	5.4367	Struck by falling object 6; Explosions, uns. 5; Overexertion by lifting objects 4; Overexertion by welding, holding, carrying objects 4; Accident type, n.e.c. 3; Struck by, n.e.c. 2; Caught in, under, between, n.e.c. 2; Contact with electric current 2; Contact with radiation or caustics, by inhalation 2; Struck against stationary object 1; Fall to lower level, n.e.c. 1; Fall onto walkway, etc. 1; Overexertion, n.e.c. 1; Contact with temp. extremes, general heat 1; Contact with temp. extremes, general cold 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, both in motion, uns. 1;
129	161 Surveyors	3	5.4261	Struck by, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1;
130	481 Heavy equipment mechanics	35	5.4032	Struck by, n.e.c. 7; Struck by falling object 4; Contact with electric current 4; Contact with radiation or caustics, by inhalation 4; Fall from elevation, uns. 2; Caught between moving and stationary objects 2; Caught in, under, between, n.e.c. 2; Overexertion by lifting objects 2; Overexertion by welding, holding, carrying objects 2; Struck by flying object 1; Fall from vehicle 1; Fall on stairs 1; Motor vehicle accident, non collision, overturned 1; Explosions, uns. 1; Accident type, n.e.c. 1;
131	681 Winding operatives, n.e.c. extremes, hot objects 1;	2	5.3244	Struck by, n.e.c. 1; Contact with temp.
132	480 Farm Implement mechanics collision, ran off roadway 1;	2	5.2828	Fall from vehicle 1; Motor vehicle accident, non
133	115 Business teachers	1	5.1664	Struck by falling object 1;
134	260 Advertising agents	4	5.1384	Motor vehicle accident, stationary object in roadway 2; Motor vehicle accident, stationary object uns. 1; Accident type, n.e.c. 1;
135	611 Clothing ironers	4	5.1284	Overexertion by pulling or pushing objects 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1; Contact with temp. extremes, hot objects 1;
136	530 Pressmen and plate printers	6	5.0804	Overexertion by pulling or pushing objects 2; Fall to lower level, n.e.c. 1; Overexertion by lifting objects 1; Overexertion, n.e.c. 1; Non classifiable 1;
137	692 Machine operators, n.e.c. 2; Explosions, uns. 2; Non classifiable 2; Struck against stationary object 1; Struck by flying object 1; Struck by, n.e.c. 1; Overexertion by lifting objects 1; Contact with temp. extremes, hot objects 1;	11	5.0497	Contact with radiation or caustics, by inhalation 2; Struck against stationary object 1; Struck by flying object 1; Struck by, n.e.c. 1; Overexertion by lifting objects 1; Contact with temp. extremes, hot objects 1;
138	680 Welders and flame-cutters	23	5.0413	Contact with radiation or caustics, by inhalation 5; Struck by falling object 3; Struck by, n.e.c. 2; Caught in or under collapsing materials 2; Contact with temp. extremes, hot objects 2; Explosions, uns. 2; Non classifiable 2; Struck against moving object 1; Fall from scaffold, etc. 1; Fall into shaft, etc. 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1;
139	240 Elementary school administrators	10	5.0407	Accident type, n.e.c. 6; Struck by flying object 1; Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, non collision, ran off roadway 1; Non classifiable 1;
140	950 Housekeepers, except private home	5	5.0295	Overexertion by welding, holding, carrying objects 2; Fall onto walkway, etc. 1; Aircraft accident 1; Motor vehicle accident, both in motion, oncoming 1;
141	025 Foresters	2	4.9615	Struck by, uns. 1; Struck by, n.e.c. 1;
142	230 Restaurant and bar managers	23	4.9047	Struck by flying object 9; Overexertion by welding, holding, carrying objects 4; Struck by, n.e.c. 3; Overexertion by lifting objects 2; Fall on stairs 1; Fall into shaft, etc. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1;
143	180 Athletes and kindred workers	4	4.8813	Fall to lower level, n.e.c. 1; Fall onto or against objects 1; Overexertion, n.e.c. 1; Contact with radiation or caustics, by inhalation 1;
144	470 Air conditioning mechanics	7	4.8580	Accident type, n.e.c. 2; Fall into shaft, etc. 1; Overexertion by welding, holding, carrying objects 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Explosions, uns. 1;
145	326 Insurance adjusters	6	4.8492	Motor vehicle accident, both in motion, oncoming 2; Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, stationary object in roadway 1; Accident type, n.e.c. 1;
146	615 Dry wall installers	3	4.8448	Fall from scaffold, etc. 1; Motor vehicle accident, struck while standing in roadway 1; Accident type, n.e.c. 1;
147	210 Credit men	2	4.7226	Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, oncoming 1;
148	740 Animal caretakers, except farm	3	4.6012	Fall onto walkway, etc. 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, non collision, overturned 1;
149	216 Building managers and superintendents	5	4.5760	Struck by flying object 1; Fall from scaffold, etc. 1; Overexertion by lifting objects 1; Aircraft accident 1; Explosions, uns. 1;
150	222 Public administration, n.e.c.	13	4.4388	Aircraft accident 5; Overexertion by welding, holding, carrying objects 2; Accident type, n.e.c. 2; Struck by falling object 1; Struck by flying object 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, stationary object in roadway 1;
151	072 Veterinarians	1	4.3435	Overexertion by lifting objects 1;

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<i>Rank</i>	<i>Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
152	162	Engineering technicians, n.e.c. Fall onto walkway, etc. 1; Contact with electric current 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, standing vehicle on side of road 1;	7	4.2357	Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1;
153	215	Inspectors, except construction Contact with radiation or caustics, by inhalation 1; Accident type, n.e.c. 1;	3	4.1663	Overexertion by welding, holding, carrying objects 1;
154	482	Home appliance installers Motor vehicle accident, stationary object in roadway 1; Non classifiable 1;	4	4.1132	Fall from scaffold, etc. 1; Contact with electric current 1; Motor vehicle accident, stationary object in roadway 1; Non classifiable 1;
155	390	Ticket agents Motor vehicle accident, uns. 1;	4	4.0750	Struck by, n.e.c. 2; Struck by flying object 1;
156	560	Tile setters	1	3.9793	Overexertion by lifting objects 1;
157	631	Meat cutters, except manufacturing Overexertion by lifting objects 1; Motor vehicle accident, stationary object in roadway 1; Accident type, n.e.c. 1;	5	3.9256	Overexertion by welding, holding, carrying objects 2; Overexertion by lifting objects 1; Motor vehicle accident, stationary object in roadway 1; Accident type, n.e.c. 1;
158	223	Officials of lodges, etc.	3	3.8442	Struck by flying object 1; Fall to lower level, n.e.c. 1; Motor vehicle accident, non collision, ran off roadway 1;
159	910	Bartenders	8	3.8045	Struck by flying object 3; Accident type, n.e.c. 2; Struck by, n.e.c. 1; Overexertion by welding, holding, carrying objects 1; Non classifiable 1;
160	760	Longshoremen and stevedores	1	3.7308	Overexertion by pulling or pushing objects 1;
161	656	Stamping press operatives under, between, n.e.c. 1; Overexertion, uns. 1;	3	3.6747	Struck against stationary object 1; Caught in,
162	211	Funeral directors	1	3.6374	Motor vehicle accident, both in motion, uns. 1;
163	471	Aircraft mechanics 2; Aircraft accident 1;	3	3.6028	Contact with radiation or caustics, by inhalation
164	644	Painters, manufactured goods 3; Fall to lower level, n.e.c. 1;	4	3.5798	Contact with radiation or caustics, by inhalation
165	645	Photographic process workers Contact with radiation or caustics, by inhalation 1;	2	3.3845	Overexertion by pulling or pushing objects 1;
166	013	Industrial engineers between, n.e.c. 1; Contact with temp. extremes, hot objects 1; Aircraft accident 1;	5	3.3745	Accident type, n.e.c. 2; Caught in, under,
167	011	Civil engineers oncoming 2; Struck by, n.e.c. 1; Motor vehicle accident, uns. 1;	4	3.2771	Motor vehicle accident, both in motion,
168	954	Welfare service aides accident, both in motion, oncoming 1;	2	3.2421	Motor vehicle accident, uns. 1; Motor vehicle
169	145	Teachers, except college, n.e.c. caustics, by inhalation 1; Aircraft accident 1; Motor vehicle accident, stationary object in roadway 1;	5	3.2367	Struck by, n.e.c. 2; Contact with radiation or
170	064	Pharmacists	3	3.1043	Overexertion by lifting objects 2; Overexertion, n.e.c. 1;
171	472	Automobile body repairmen objects 1; Contact with radiation or caustics, by inhalation 1; Explosions, uns. 1; Accident type, n.e.c. 1;	4	3.0907	Overexertion by welding, holding, carrying
172	150	Agriculture technicians oncoming 1;	1	3.0530	Motor vehicle accident, both in motion,
173	913	Dishwashers object 1; Overexertion, n.e.c. 1; Contact with temp. extremes, hot objects 1;	5	2.9731	Fall onto walkway, etc. 2; Struck by flying
174	184	Editors and reporters	4	2.9630	Struck by flying object 1; Overexertion by
175	005	Computer specialists, n.e.c.	1	2.9232	Struck by flying object 1;
176	634	Meat wrappers, retail trade 1;	1	2.8915	Contact with radiation or caustics, by inhalation
177	552	Telephone installers Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Accident type, n.e.c. 1;	6	2.8915	Struck by falling object 1; Fall from ladder 1;
178	381	Stock clerk or storekeeper Struck by falling object 1; Caught between moving and stationary objects 1; Caught in or under collapsing materials 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1;	10	2.8655	Struck by flying object 3; Overexertion by
179	031	Lawyers n.e.c. 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1; Aircraft accident 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1;	10	2.7507	Struck by flying object 2; Fall to lower level,
180	650	Drill press operatives 1;	1	2.6567	Contact with radiation or caustics, by inhalation
181	762	Stock handlers moving and stationary objects 3; Overexertion by lifting objects 3; Non classifiable 2; Struck by falling object 1; Struck by, n.e.c. 1; Fall onto walkway, etc. 1; Overexertion by welding, holding, carrying objects 1; Contact with temp. extremes, hot objects 1;	17	2.6560	Struck by flying object 4; Caught between
182	265	Insurance agents Fall from vehicle 1; Fall onto walkway, etc. 1; Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, standing vehicle on side of road 1; Accident type, n.e.c. 1;	10	2.5785	Struck by, n.e.c. 3; Struck by flying object 1;

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<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
183	281 Sales reps, manufacturing Struck by, n.e.c. 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, vehicles moving in intersection 1;	7	2.5748	Aircraft accident 2; Struck by flying object 1;
184	044 Biological scientists 1;	1	2.4889	Contact with radiation or caustics, by inhalation 1;
185	010 Chemical engineers	1	2.4435	Explosions, uns. 1;
186	202 Bank officers Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Accident type, n.e.c. 1;	11	2.4378	Aircraft accident 3; Struck by flying object 1;
187	171 Radio operators	1	2.4313	Accident type, n.e.c. 1;
188	323 Expeditors welding, holding, carrying objects 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, non collision, overturned 1;	4	2.4245	Struck by flying object 1; Overexertion by
189	225 Purchasing agents, n.e.c. objects 1; Overexertion, n.e.c. 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, other non collision 1;	4	2.3829	Overexertion by welding, holding, carrying
190	355 Office machine operators	1	2.3676	Fall onto walkway, etc. 1;
191	320 Enumerators and interviewers	1	2.3502	Accident type, n.e.c. 1;
192	563 Upholsterers	1	2.3439	Accident type, n.e.c. 1;
193	205 Buyers, wholesale and retail Overexertion by welding, holding, carrying objects 1; Accident type, n.e.c. 1;	3	2.2950	Overexertion by pulling or pushing objects 1;
194	610 Manufacturing inspectors both in motion, oncoming 1; Explosions, uns. 1; Accident type, n.e.c. 1;	11	2.1800	Contact with radiation or caustics, by inhalation 5; Struck by, n.e.c. 1; Fall onto walkway, etc. 1; Caught in running or meshing objects 1; Motor vehicle accident,
195	461 Machinists carrying objects 1; Contact with electric current 1;	8	2.1661	Contact with radiation or caustics, by inhalation 2; Non classifiable 2; Struck against stationary object 1; Struck by, n.e.c. 1; Overexertion by welding, holding,
196	212 Health administrators welding, holding, carrying objects 1; Motor vehicle accident, both in motion, oncoming 1;	3	2.1217	Struck by flying object 1; Overexertion by
197	664 Shoemaking machine operators	1	2.0402	Overexertion by welding, holding, carrying objects 1;
198	643 Packers, except meat and produce radiation or caustics, by inhalation 2; Struck by falling object 1; Struck by, n.e.c. 1; Accident type, n.e.c. 1;	8	1.9919	Overexertion by lifting objects 3; Contact with
199	100 Social workers 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, both in motion, same direction 1; Accident type, n.e.c. 1;	5	1.9661	Contact with radiation or caustics, by ingestion
200	141 Adult education teachers	1	1.9631	Accident type, n.e.c. 1;
201	922 Health aides, except nursing welding, holding, carrying objects 1; Motor vehicle accident, uns. 1;	4	1.9489	Accident type, n.e.c. 2; Overexertion by
202	395 Unspecified clerical workers stationary object 1; Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Contact with radiation or caustics, by inhalation 1;	6	1.9376	Accident type, n.e.c. 2; Struck against
203	152 Draftsmen 1; Overexertion by welding, holding, carrying objects 1;	4	1.8662	Contact with electric current 2; Struck by, n.e.c.
204	371 Secretaries, medical	1	1.7730	Struck by flying object 1;
205	561 Tool and die makers Contact with radiation or caustics, by inhalation 1;	2	1.7042	Overexertion by pulling or pushing objects 1;
206	901 Maids, except private home radiation or caustics, by inhalation 1;	2	1.6904	Struck by flying object 1; Contact with
207	002 Architects	1	1.6538	Overexertion by lifting objects 1;
208	602 Assemblers from ladder 1; Caught in, under, between, uns. 1; Caught in or under collapsing materials 1; Caught in, under, between, n.e.c. 1; Bodily reaction, uns. 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Aircraft accident 1; Motor vehicle accident, both in motion, uns. 1; Explosions, uns. 1;	13	1.6519	Accident type, n.e.c. 2; Struck by, n.e.c. 1; Fall
209	314 Counter clerks, except food	4	1.6514	Struck by flying object 2; Struck by, n.e.c. 2;
210	982 Housekeepers, private home	1	1.5010	Motor vehicle accident, uns. 1;
211	925 Nursing aides and orderlies type, n.e.c. 2; Struck by, n.e.c. 1; Fall onto walkway, etc. 1; Fall onto or against objects 1; Contact with radiation or caustics, by inhalation 1; Non classifiable 1;	11	1.4949	Overexertion by lifting objects 4; Accident
212	374 Shipping and receiving clerk type, n.e.c. 2; Overexertion by welding, holding, carrying objects 1;	5	1.4833	Overexertion by lifting objects 2; Accident
213	183 Designers objects 1;	2	1.4703	Struck by, n.e.c. 1; Overexertion by lifting
214	194 Artists and entertainers	1	1.4505	Struck by, n.e.c. 1;
215	912 Cooks, except private home radiation or caustics, by inhalation 3; Accident type, n.e.c. 2; Struck by falling object 1; Struck by flying object 1;	13	1.4457	Overexertion by lifting objects 3; Contact with

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<i>Rank</i>	<i>Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
215	912	Cooks, except private home (Cont.)			Fall onto walkway, etc. 1; Overexertion by
		wielding, holding, carrying objects 1, Motor vehicle accident, standing vehicle on side of road 1;			
216	935	Barbers	1	1.4063	Explosions, uns. 1;
217	056	Personnel workers	4	1.3839	Struck by flying object 1; Aircraft accident 1;
		Motor vehicle accident, both in motion, uns. 1; Accident type, n.e.c. 1;			
218	012	Electrical engineers	4	1.3257	Motor vehicle accident, uns. 2; Fall to lower
		level, n.e.c. 1; Motor vehicle accident, both in motion, oncoming 1;			
219	101	Recreation workers	1	1.2807	Contact with radiation or caustics, by inhalation
		1;			
220	220	Office managers, n.e.c.	4	1.2687	Struck by flying object 1; Fall on stairs 1;
		Contact with radiation or caustics, by inhalation 1; Aircraft accident 1;			
221	282	Wholesale sales reps.	8	1.2513	Fall to lower level, n.e.c. 1; Contact with temp.
		extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor			
		vehicle accident, both in motion, oncoming 1; Motor vehicle accident, vehicles moving in intersection 1; Motor			
		vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1;			
222	192	Public relations reps	1	1.1613	Motor vehicle accident, standing vehicle on
		side of road 1;			
223	674	Textile operatives, n.e.c.	1	1.1587	Caught in running or meshing objects 1;
224	235	College administrators	1	1.1522	Accident type, n.e.c. 1;
225	926	Practical nurses	3	1.1512	Contact with radiation or caustics, by inhalation
		2; Overexertion by lifting objects 1;			
226	310	Cashiers	12	1.1237	Struck by flying object 2; Struck by, n.e.c. 2;
		Accident type, n.e.c. 2; Struck by, uns. 1; Fall onto walkway, etc. 1; Overexertion by welding, holding, carrying			
		objects 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, ran off			
		roadway 1; Explosions, uns. 1;			
227	823	Unpaid family farm laborers	2	1.1159	Struck by falling object 2;
228	916	Food service workers, n.e.c.	4	1.1080	Non classifiable 2; Struck by, n.e.c. 1; Fall onto
		walkway, etc. 1;			
229	086	Clergymen	2	1.0695	Overexertion by lifting objects 1; Motor vehicle
		accident, non collision, sudden stop or start 1;			
230	921	Dental assistants	1	1.0554	Struck against stationary object 1;
231	915	Waiters	10	1.0381	Struck by flying object 2; Contact with
		radiation or caustics, by inhalation 2; Struck by, n.e.c. 1; Fall onto walkway, etc. 1; Overexertion by lifting objects			
		1; Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, non collision, overturned 1; Non			
		classifiable 1;			
232	065	Physicians	3	0.9992	Accident type, n.e.c. 2; Motor vehicle accident,
		uns. 1;			
233	271	Stock and bond salesmen	1	0.9681	Struck by, n.e.c. 1;
234	332	Mail handlers	1	0.8643	Motor vehicle accident, uns. 1;
235	174	Vocational counselors	1	0.8527	Motor vehicle accident, both in motion,
		oncoming 1;			
236	321	Estimators and investigators	3	0.8364	Contact with radiation or caustics, by inhalation
		1; Motor vehicle accident, both in motion, uns. 1; Accident type, n.e.c. 1;			
237	195	Unspecified research workers	1	0.8319	Contact with radiation or caustics by absorption
		1;			
238	301	Bank tellers	3	0.8309	Struck by flying object 2; Caught in, under,
		between, n.e.c. 1;			
239	422	Compositors and typesetters	1	0.8200	Accident type, n.e.c. 1;
240	055	Operations researchers	1	0.7679	Motor vehicle accident, standing vehicle on
		side of road 1;			
241	190	Painters and sculptors	1	0.7425	Motor vehicle accident, non collision,
		overturned 1;			
242	004	Computer systems analysts	1	0.7143	Motor vehicle accident, uns. 1;
243	911	Busboys	1	0.7082	Struck by flying object 1;
244	364	Receptionists	3	0.6950	Struck by flying object 1; Struck by, n.e.c. 1;
		Accident type, n.e.c. 1;			
245	942	Child care, except private home	2	0.6732	Struck by, n.e.c. 1; Contact with electric current
		1;			
246	914	Food counter workers	2	0.6614	Struck by flying object 1; Overexertion by
		lifting objects 1;			
247	312	Clerical supervisors, n.e.c.	1	0.5964	Struck by, n.e.c. 1;
248	284	Sales workers except clerks, retail	2	0.5645	Motor vehicle accident, both in motion,
		oncoming 1; Motor vehicle accident, non collision, overturned 1;			
249	153	Electrical engineering technicians	1	0.5421	Contact with radiation or caustics, by inhalation
		1;			
250	001	Accountants	4	0.5410	Struck by flying object 1; Aircraft accident 1;
		Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, ran off roadway 1;			
251	270	Real estate agents	2	0.5223	Contact with radiation or caustics, by inhalation
		1; Motor vehicle accident, non collision, overturned 1;			

Appendix C (Cont.)

<i>Rank Code</i>	<i>Occupation</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Accidents</i>
252	801 Farmers	5	0.5207	Struck by falling object 1; Struck by, n.e.c. 1; Caught in, under, between, n.e.c. 1; Motor vehicle accident, uns. 1; Accident type, n.e.c. 1;
253	325 File clerks	1	0.4909	Overexertion by lifting objects 1;
254	305 Bookkeepers	6	0.4624	Struck by flying object 1; Fall to lower level, n.e.c. 1; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, standing vehicle on side of road 1; Accident type, n.e.c. 1;
255	375 Statistical clerks	1	0.3931	Fall from vehicle 1;
256	663 Sewers and stitchers	2	0.3821	Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1;
257	394 Misc. clerical workers etc. 1; Explosions, uns. 1;	3	0.3745	Struck by flying object 1; Fall onto walkway,
258	283 Sales clerks, retail trade	6	0.3736	Motor vehicle accident, both in motion, oncoming 2; Struck by flying object 1; Fall onto walkway, etc. 1; Motor vehicle accident, both in motion, same direction 1;
259	984 Servants, private household	1	0.3181	Fall from vehicle 1;
260	372 Secretaries, n.e.c.	7	0.2915	Struck by flying object 2; Struck by, n.e.c. 2; Fall onto walkway, etc. 2; Contact with temp. extremes, hot objects 1;
261	144 Secondary school teachers	2	0.2426	Accident type, n.e.c. 2;
262	075 Registered nurses	1	0.1129	Non classifiable 1;
263	142 Elementary school teachers	1	0.1064	Motor vehicle accident, both in motion, same direction 1;
NA	280 Sales representatives, n.e.c.	95	NA	Struck by flying object 12; Overexertion by welding, holding, carrying objects 12; Motor vehicle accident, uns. 12; Motor vehicle accident, both in motion, oncoming 9; Struck by, n.e.c. 6; Overexertion by lifting objects 6; Accident type, n.e.c. 6; Struck by falling object 3; Fall onto walkway, etc. 3; Contact with radiation or caustics, by inhalation 3; Motor vehicle accident, both in motion, uns. 3; Motor vehicle accident, standing vehicle on side of road 3; Motor vehicle accident, non collision, overturned 3; Aircraft accident 2; Motor vehicle accident, vehicles moving in intersection 2; Non classifiable 2; Fall on stairs 1; Fall on same level, n.e.c. 1; Contact with temp. extremes, hot objects 1; Transportation accident, not motor vehicle, uns. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, ran off roadway 1;
NA	575 Craftsmen, n.e.c.	5	NA	Fall from scaffold, etc. 1; Caught in, under, between, n.e.c. 1; Contact with electric current 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, ran off roadway 1;
NA	995 OCCUPATION NOT REPORTED	234	NA	Motor vehicle accident, uns. 42; Non classifiable 33; Accident type, n.e.c. 27; Struck by flying object 18; Struck by, n.e.c. 17; Contact with radiation or caustics, by inhalation 15; Struck against, uns. 8; Caught in, under, between, n.e.c. 7; Struck by falling object 6; Overexertion by lifting objects 6; Contact with temp. extremes, hot objects 5; Contact with electric current 4; Struck against stationary object 3; Fall to lower level, n.e.c. 3; Overexertion by welding, holding, carrying objects 3; Contact with temp. extremes, uns. 3; Contact with radiation or caustics, uns. 3; Motor vehicle accident, both in motion, uns. 3; Motor vehicle accident, both in motion, oncoming 3; Motor vehicle accident, non collision, overturned 3; Fall onto walkway, etc. 2; Overexertion, n.e.c. 2; Contact with radiation or caustics by absorption 2; Fall from elevation, uns. 1; Fall from ladder 1; Fall from vehicle 1; Fall on stairs 1; Fall into shaft, etc. 1; Fall onto or against objects 1; Fall on same level, n.e.c. 1; Caught between moving and stationary objects 1; Bodily reaction, uns. 1; Contact with temp. extremes, general heat 1; Contact with radiation or caustics, n.e.c. 1; Aircraft accident 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, uns. 1; Motor vehicle accident, other non collision 1;

n.e.c. = not elsewhere classified

uns. = unspecified

Appendix D

Male and Female Job Deaths within Industries
Ranked in Descending Order by Rate of Deaths per 100,000 Workers
With Frequencies of Deaths by Type of Injury or Illness

<i>Rank</i>	<i>Code</i>	<i>Industry</i>	<i>Number of Deaths</i>	<i>Rate per 100,000</i>	<i>Types of Injury or Illness</i>
1	241	Logging Camps and Contractors	157	186.8158	Struck by falling object 55; Struck by, n.e.c. 23; Struck by, uns. 10; Caught between moving and stationary objects 8; Non classifiable 6; Motor vehicle accident, non collision, ran off roadway 5; Aircraft accident 4; Motor vehicle accident, uns. 4; Motor vehicle accident, non collision, overturned 4; Struck against moving object 3; Fall from vehicle 3; Fall to lower level, n.e.c. 3; Caught in running or meshing objects 3; Motor vehicle accident, both in motion, uns. 3; Motor vehicle accident, vehicles moving in intersection 3; Struck against, uns. 2; Struck by flying object 2; Caught in, under, between, n.e.c. 2; Contact with electric current 2; Accident type, n.e.c. 2; Fall from ladder 1; Fall onto walkway, etc. 1; Caught in, under, between, uns. 1; Caught between two or more moving objects 1; Contact with temp. extremes, general heat 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, struck while standing in roadway 1; Explosions, uns. 1; Non-highway vehicle accident, overturned vehicle 1; Non-highway vehicle accident, vehicle out of control 1;
2	328	Cut Stone and Stone Products	12	103.0043	Contact with radiation or caustics, by inhalation 8; Struck by falling object 1; Struck by flying object 1; Overexertion by wielding, holding, carrying objects 1, Non classifiable 1;
3	412	Taxicabs	49	102.4462	Struck by flying object 19; Struck by, n.e.c. 5; Overexertion by wielding, holding, carrying objects 4; Motor vehicle accident, both in motion, uns. 4; Motor vehicle accident, standing vehicle on side of road 4; Motor vehicle accident, both in motion, same direction 2; Accident type, n.e.c. 2; Caught between moving and stationary objects 1; Rubbed or abraded by objects handled 1; Overexertion, uns. 1; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, ran off roadway 1;
4	101	Iron Ores	7	45.2196	Contact with radiation or caustics, by inhalation 6; Caught in or under collapsing materials 1;
5	142	Crushed and Broken Stone	14	37.1058	Caught in or under collapsing materials 4; Motor vehicle accident, non collision, ran off roadway 2; Struck by falling object 1; Struck by, n.e.c. 1; Fall from vehicle 1; Caught in running or meshing objects 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1; Non classifiable 1;
6	161	Highway, Street Construction	93	36.2983	Struck by, n.e.c. 22; Struck by falling object 8; Motor vehicle accident, non collision, overturned 5; Accident type, n.e.c. 5; Caught between moving and stationary objects 4; Overexertion by wielding, holding, carrying objects 4; Contact with radiation or caustics, by inhalation 4; Motor vehicle accident, uns. 4; Motor vehicle accident, vehicles moving in intersection 4; Caught in, under, between, n.e.c. 3; Overexertion by lifting objects 3; Contact with electric current 3; Motor vehicle accident, non collision, ran off roadway 3; Struck by, uns. 2; Struck by flying object 2; Fall from vehicle 2; Caught in, under, between, uns. 2; Non classifiable 2; Struck against moving object 1; Fall from scaffold, etc. 1; Fall into shaft, etc. 1; Fall to lower level, n.e.c. 1; Fall onto walkway, etc. 1; Caught in or under collapsing materials 1; Rubbed or abraded by repetition of pressure 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, other non collision 1;
7	147	Chemical and Fertilizer Minerals	8	35.1958	Struck by falling object 2; Motor vehicle accident, struck while standing in roadway 2; Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
8	421	Trucking	401	32.8427	Struck by, n.e.c. 40; Motor vehicle accident, non collision, ran off roadway 40; Motor vehicle accident, non collision, overturned 39; Motor vehicle accident, uns. 37; Overexertion by wielding, holding, carrying objects 24; Motor vehicle accident, standing vehicle on side of road 20; Accident type, n.e.c. 20; Motor vehicle accident, both in motion, uns. 17; Struck by falling object 16; Motor vehicle accident, both in motion, oncoming 15; Non classifiable 12; Overexertion by lifting objects 10; Motor vehicle accident, stationary object in roadway 10; Motor vehicle accident, non collision, uns. 10; Motor vehicle accident, both in motion, same direction 9; Fall from vehicle 7; Struck by flying object 6; Overexertion, n.e.c. 6; Contact with temp. extremes, hot objects 6; Motor vehicle accident, other non collision 6; Caught in, under, between, n.e.c. 5; Contact with electric current 5; Motor vehicle accident, vehicles moving in intersection 5; Fall into shaft, etc. 4; Caught between moving and stationary objects 4; Overexertion by pulling or pushing objects 4; Contact with radiation or caustics, by inhalation 3; Explosions, uns. 3; Struck against stationary object 2; Struck by, uns. 2; Fall onto walkway, etc. 2; Caught in running or meshing objects 2; Fall from ladder 1; Fall on stairs 1; Bodily reaction, uns. 1; Bodily reaction - involuntary motions 1; Contact with temp. extremes, general heat 1; Contact with radiation or caustics, by ingestion 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, sudden stop or start 1; Non-highway vehicle accident, overturned vehicle 1;
9	179	Miscellaneous Special Contractors	130	32.4513	Contact with radiation or caustics, by inhalation 17; Fall to lower level, n.e.c. 15; Struck by falling object 11; Struck by, n.e.c. 9; Contact with electric current 9; Caught in or under collapsing materials 8; Non classifiable 6; Fall from scaffold, etc. 5;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
9 179	Miscellaneous Special Contractors (Cont.)			Caught in, under, between, n.e.c. 5; Fall into shaft, etc. 4; Motor vehicle accident, uns. 4; Overexertion by welding, holding, carrying objects 3; Motor vehicle accident, both in motion, oncoming 3; Accident type, n.e.c. 3; Struck against stationary object 2; Fall from ladder 2; Fall from vehicle 2; Caught between moving and stationary objects 2; Overexertion by lifting objects 2; Contact with radiation or caustics, by absorption 2; Motor vehicle accident, both in motion, same direction 2; Motor vehicle accident, non collision, overturned 2; Motor vehicle accident, non collision, ran off roadway 2; Struck by, uns. 1; Struck by flying object 1; Fall from elevation, uns. 1; Fall onto walkway, etc. 1; Overexertion by pulling or pushing objects 1; Contact with temp. extremes, general heat 1; Contact with temp. extremes, hot objects 1; Aircraft accident 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, standing vehicle on side of road 1;
10 103	Lead and Zinc Ores	9	30.5085	Contact with radiation or caustics, by inhalation 4; Struck by falling object 2; Struck against moving object 1; Struck by, n.e.c. 1; Fall from elevation, uns. 1;
11 162	Heavy Construction, except Highway	175	30.4089	Struck by, n.e.c. 24; Contact with radiation or caustics, by inhalation 24; Contact with electric current 18; Fall to lower level, n.e.c. 13; Caught in or under collapsing materials 13; Struck by falling object 12; Non classifiable 9; Caught between moving and stationary objects 8; Fall from vehicle 5; Accident type, n.e.c. 5; Fall from scaffold, etc. 4; Fall into shaft, etc. 4; Overexertion by welding, holding, carrying objects 4; Caught in, under, between, n.e.c. 3; Motor vehicle accident, uns. 3; Motor vehicle accident, both in motion, same direction 3; Motor vehicle accident, non collision, overturned 3; Fall from ladder 2; Bodily reaction, uns. 2; Overexertion by lifting objects 2; Contact with temp. extremes, hot objects 2; Struck against moving object 1; Struck by flying object 1; Fall from elevation, uns. 1; Fall onto walkway, etc. 1; Fall onto or against objects 1; Overexertion, n.e.c. 1; Aircraft accident 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, ran off roadway 1;
12 242	Sawmills and Planing Mills	60	28.8823	Struck by falling object 11; Struck by, n.e.c. 8; Caught in, under, between, n.e.c. 6; Non classifiable 4; Motor vehicle accident, non collision, overturned 3; Caught between moving and stationary objects 2; Overexertion by welding, holding, carrying objects 2; Motor vehicle accident, both in motion, uns. 2; Explosions, uns. 2; Struck against, uns. 1; Struck against stationary object 1; Struck against moving object 1; Struck by, uns. 1; Struck by flying object 1; Fall on stairs 1; Fall to lower level, n.e.c. 1; Fall onto or against objects 1; Caught in running or meshing objects 1; Caught in or under collapsing materials 1; Contact with electric current 1; Contact with temp. extremes, uns. 1; Contact with radiation or caustics, uns. 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, ran off roadway 1; Motor vehicle accident, other non collision 1; Accident type, n.e.c. 1;
13 207	Fats and Oils	11	28.0684	Overexertion by welding, holding, carrying objects 2; Accident type, n.e.c. 2; Non classifiable 2; Fall onto walkway, etc. 1; Caught in, under, between, n.e.c. 1; Overexertion by lifting objects 1; Contact with electric current 1; Motor vehicle accident, standing vehicle on side of road 1;
14 311	Leather Tanning and Finishing	5	27.9174	Contact with radiation or caustics, by inhalation 3; Accident type, n.e.c. 2;
15 495	Sanitary Services	15	27.2777	Overexertion by welding, holding, carrying objects 3; Struck by falling object 2; Struck by, n.e.c. 2; Struck by flying object 1; Caught between moving and stationary objects 1; Overexertion by lifting objects 1; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1; Explosions, uns. 1;
16 551	New and Used Car Dealers	36	25.8157	Accident type, n.e.c. 6; Caught between moving and stationary objects 3; Overexertion by welding, holding, carrying objects 3; Contact with radiation or caustics, by inhalation 3; Struck by flying object 2; Struck by, n.e.c. 2; Overexertion by lifting objects 2; Motor vehicle accident, both in motion, oncoming 2; Motor vehicle accident, non collision, overturned 2; Explosions, uns. 2; Fall onto walkway, etc. 1; Caught in, under, between, n.e.c. 1; Overexertion, n.e.c. 1; Contact with temp. extremes, general heat 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, standing vehicle on side of road 1; Non classifiable 1;
17 172	Painting, Papering, Decorating	39	25.7120	Fall from scaffold, etc. 14; Fall to lower level, n.e.c. 6; Contact with radiation or caustics, by inhalation 4; Fall from ladder 3; Contact with electric current 3; Fall onto walkway, etc. 2; Overexertion by welding, holding, carrying objects 2; Motor vehicle accident, non collision, ran off roadway 2; Accident type, n.e.c. 2; Overexertion by pulling or pushing objects 1;
18 144	Sand and Gravel	9	25.5827	Accident type, n.e.c. 3; Motor vehicle accident, uns. 2; Struck by, n.e.c. 1; Caught between moving and stationary objects 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1;
19 327	Concrete and Plaster Products	50	24.6548	Contact with electric current 7; Struck by falling object 5; Struck by, n.e.c. 5; Caught in or under collapsing materials 4; Overexertion by welding, holding, carrying objects 3; Motor vehicle accident, vehicles moving in intersection 3; Caught between moving and stationary objects 2; Caught in, under, between, n.e.c. 2; Overexertion, n.e.c. 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, non collision, ran off roadway 2; Accident type, n.e.c. 2; Fall from ladder 1; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Fall onto walkway, etc. 1; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, struck while standing in roadway 1; Explosions, uns. 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
20 295	Paving and Roofing Materials	7	24.4499	Contact with radiation or caustics, by inhalation 3; Overexertion by lifting objects 2; Fall from vehicle 1; Non classifiable 1;
21 176	Roofing and Sheet Metal Work	43	24.3875	Fall to lower level, n.e.c. 9; Fall from scaffold, etc. 5; Contact with radiation or caustics, by inhalation 4; Motor vehicle accident, both in motion, oncoming 3; Struck by falling object 2; Fall from elevation, uns. 2; Fall from ladder 2; Overexertion by lifting objects 2; Overexertion by welding, holding, carrying objects 2; Contact with temp. extremes, general heat 2; Struck against stationary object 1; Struck by, n.e.c. 1; Fall from vehicle 1; Caught in or under collapsing materials 1; Overexertion, uns. 1; Contact with electric current 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, stationary object in roadway 1; Non classifiable 1;
22 458	Air Transportation Services	13	23.3981	Struck by, n.e.c. 2; Overexertion by lifting objects 2; Aircraft accident 2; Motor vehicle accident, uns. 2; Struck against moving object 1; Struck by falling object 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, standing vehicle on side of road 1;
23 334	Secondary Nonferrous Metals	5	23.2775	Struck by falling object 2; Contact with radiation or caustics, by inhalation 1; Explosions, uns. 1; Non classifiable 1;
24 332	Iron and Steel Foundries	41	23.1064	Contact with radiation or caustics, by inhalation 16; Struck by, n.e.c. 7; Contact with temp. extremes, hot objects 4; Non classifiable 4; Struck by falling object 2; Fall from ladder 1; Fall to lower level, n.e.c. 1; Fall on same level, n.e.c. 1; Caught in, under, between, n.e.c. 1; Overexertion by lifting objects 1; Contact with electric current 1; Contact with temp. extremes, general heat 1; Accident type, n.e.c. 1;
25 178	Water Well Drilling	4	22.5098	Contact with electric current 3; Struck against stationary object 1;
26 509	Miscellaneous Durable Goods	43	21.7975	Struck by, n.e.c. 14; Struck by falling object 7; Struck by flying object 3; Struck against moving object 2; Fall to lower level, n.e.c. 2; Contact with electric current 2; Motor vehicle accident, standing vehicle on side of road 2; Accident type, n.e.c. 2; Fall from scaffold, etc. 1; Caught between moving and stationary objects 1; Caught in or under collapsing materials 1; Caught in, under, between, n.e.c. 1; Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
27 493	Combination Utility Services	41	20.5226	Contact with electric current 10; Struck by, n.e.c. 6; Overexertion by welding, holding, carrying objects 4; Contact with radiation or caustics, by inhalation 3; Struck by flying object 2; Accident type, n.e.c. 2; Struck by falling object 1; Fall from ladder 1; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Caught in, under, between, n.e.c. 1; Overexertion by pulling or pushing objects 1; Overexertion, n.e.c. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by absorption 1; Motor vehicle accident, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, overturned 1; Explosions, uns. 1; Non classifiable 1;
28 177	Concrete Work	25	19.1527	Struck by falling object 4; Struck by, n.e.c. 3; Fall from scaffold, etc. 2; Overexertion by lifting objects 2; Motor vehicle accident, non collision, ran off roadway 2; Non classifiable 2; Fall into shaft, etc. 1; Fall to lower level, n.e.c. 1; Caught in or under collapsing materials 1; Bodily reaction -- involuntary motions 1; Overexertion, n.e.c. 1; Contact with electric current 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1;
29 598	Fuel and Ice Dealers	20	18.9970	Accident type, n.e.c. 3; Struck by flying object 2; Overexertion by lifting objects 2; Overexertion by pulling or pushing objects 2; Overexertion by welding, holding, carrying objects 2; Contact with temp. extremes, hot objects 2; Fall onto walkway, etc. 1; Overexertion, n.e.c. 1; Contact with radiation or caustics, by inhalation 1; Aircraft accident 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, non collision, ran off roadway 1; Explosions, uns. 1;
30 171	Plumbing, Heating, Air Conditioning	96	17.0343	Caught in or under collapsing materials 15; Contact with radiation or caustics, by inhalation 13; Overexertion by welding, holding, carrying objects 11; Contact with electric current 10; Accident type, n.e.c. 5; Struck by, n.e.c. 4; Struck by falling object 3; Struck by flying object 3; Overexertion by lifting objects 3; Motor vehicle accident, both in motion, oncoming 3; Fall from ladder 2; Fall into shaft, etc. 2; Fall to lower level, n.e.c. 2; Caught between moving and stationary objects 2; Contact with temp. extremes, hot objects 2; Aircraft accident 2; Motor vehicle accident, stationary object in roadway 2; Non classifiable 2; Struck against stationary object 1; Struck by, uns. 1; Fall from scaffold, etc. 1; Fall on stairs 1; Bodily reaction, uns. 1; Contact with radiation or caustics, by absorption 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, ran off roadway 1; Non-highway vehicle accident, overturned vehicle 1;
31 503	Lumber and Construction Materials	34	16.9779	Motor vehicle accident, non collision, overturned 5; Struck by, n.e.c. 4; Contact with radiation or caustics, by inhalation 4; Struck by falling object 2; Overexertion by welding, holding, carrying objects 2; Motor vehicle accident, uns. 2; Accident type, n.e.c. 2; Non classifiable 2; Fall from elevation, uns. 1; Fall from scaffold, etc. 1; Caught between moving and stationary objects 1; Caught in or under collapsing materials 1; Overexertion by lifting objects 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, stationary object in roadway 1; Explosions, uns. 1;
32 325	Structural Clay Products	7	16.8067	Struck by, n.e.c. 2; Caught in, under, between, n.e.c. 2; Struck by falling object 1; Motor vehicle accident, non collision, ran off roadway 1; Motor vehicle accident, other non collision 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
33 244	Wood Containers	7	16.7144	Struck by, n.e.c. 2; Fall onto or against objects 1; Caught between moving and stationary objects 1; Overexertion by welding, holding, carrying objects 1; Contact with temp. extremes, uns. 1; Motor vehicle accident, non collision, ran off roadway 1;
34 422	Public Warehousing	15	16.7056	Struck by falling object 3; Struck by, n.e.c. 2; Overexertion by lifting objects 2; Motor vehicle accident, standing vehicle on side of road 2; Struck against stationary object 1; Caught in, under, between, n.e.c. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Accident type, n.e.c. 1;
35 154	Nonresidential Construction	86	15.8123	Fall to lower level, n.e.c. 18; Struck by, n.e.c. 8; Fall from scaffold, etc. 8; Contact with electric current 8; Struck by falling object 6; Overexertion by welding, holding, carrying objects 6; Accident type, n.e.c. 4; Fall into shaft, etc. 3; Caught in or under collapsing materials 3; Non classifiable 3; Fall from ladder 2; Caught in, under, between, n.e.c. 2; Overexertion, n.e.c. 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, both in motion, uns. 2; Struck by flying object 1; Fall from vehicle 1; Fall onto walkway, etc. 1; Caught between moving and stationary objects 1; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1;
36 262	Paper Mills, except Building Paper	27	15.6549	Contact with radiation or caustics, by inhalation 7; Caught in or under collapsing materials 3; Struck by, n.e.c. 2; Caught in, under, between, n.e.c. 2; Aircraft accident 2; Non classifiable 2; Struck against stationary object 1; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Overexertion by welding, holding, carrying objects 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, ran off roadway 1;
37 542	Meat, Freezer Provisioners	9	15.6331	Overexertion by lifting objects 2; Caught in, under, between, n.e.c. 1; Bodily reaction, uns. 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, struck while standing in roadway 1; Accident type, n.e.c. 1;
38 285	Paints and Allied Products	10	15.5231	Explosions, uns. 4; Contact with radiation or caustics, by inhalation 2; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by absorption 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, non collision, ran off roadway 1;
39 174	Masonry, Stonework, Plastering	61	15.4956	Contact with radiation or caustics, by inhalation 13; Fall from scaffold, etc. 7; Struck by, n.e.c. 5; Caught in or under collapsing materials 5; Overexertion by welding, holding, carrying objects 5; Accident type, n.e.c. 5; Struck by falling object 3; Fall to lower level, n.e.c. 3; Overexertion by lifting objects 2; Contact with radiation or caustics, by absorption 2; Motor vehicle accident, both in motion, oncoming 2; Fall from elevation, uns. 1; Overexertion by pulling or pushing objects 1; Contact with electric current 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, other non collision 1; Explosions, uns. 1; Non classifiable 1;
40 202	Dairy Products	26	15.2663	Overexertion by welding, holding, carrying objects 4; Overexertion by lifting objects 3; Motor vehicle accident, non collision, overturned 3; Struck by, n.e.c. 2; Overexertion by pulling or pushing objects 2; Accident type, n.e.c. 2; Non classifiable 2; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Caught in or under collapsing materials 1; Caught in, under, between, n.e.c. 1; Contact with temp. extremes, general cold 1; Motor vehicle accident, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, standing vehicle on side of road 1;
41 205	Bakery Products	32	14.5171	Struck by flying object 3; Overexertion by lifting objects 3; Overexertion by welding, holding, carrying objects 3; Accident type, n.e.c. 3; Non classifiable 3; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, uns. 2; Motor vehicle accident, standing vehicle on side of road 2; Motor vehicle accident, non collision, ran off roadway 2; Struck by, uns. 1; Fall on stairs 1; Fall onto walkway, etc. 1; Caught in, under, between, n.e.c. 1; Overexertion by pulling or pushing objects 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, stationary object, uns. 1; Explosions, uns. 1;
42 494	Water Supply	3	14.1176	Contact with radiation or caustics, by inhalation 1; Aircraft accident 1; Non classifiable 1;
43 413	Intercity Highway Transport	5	13.6463	Motor vehicle accident, both in motion, same direction 2; Struck by flying object 1; Struck by, n.e.c. 1; Motor vehicle accident, both in motion, oncoming 1;
44 206	Confectionery Products	14	13.4023	Contact with temp. extremes, hot objects 4; Contact with radiation or caustics, by inhalation 3; Overexertion by welding, holding, carrying objects 2; Struck by falling object 1; Caught in or under collapsing materials 1; Caught in, under, between, n.e.c. 1; Motor vehicle accident, other non collision 1; Explosions, uns. 1;
45 224	Narrow Fabric Mills	3	13.0208	Struck by, n.e.c. 1; Contact with temp. extremes, hot objects 1; Accident type, n.e.c. 1;
46 513	Apparel, Piece Goods, Notions	22	12.5721	Overexertion by welding, holding, carrying objects 5; Overexertion by lifting objects 3; Accident type, n.e.c. 3; Struck by, n.e.c. 2; Motor vehicle accident, both in motion, oncoming 2; Struck by falling object 1; Fall into shaft, etc. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, struck while standing in roadway 1;
47 204	Grain Mill Products	17	12.5508	Motor vehicle accident, both in motion, oncoming 3; Contact with temp. extremes, hot objects 2; Contact with radiation or caustics, by inhalation 2; Struck by flying object 1; Struck by, n.e.c. 1; Caught between moving and stationary objects 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
47	204 Grain Mill Products(Cont)			Caught between two or more moving objects 1; Overexertion by wielding, holding, carrying objects 1; Contact with electric current 1; Aircraft accident 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, ran off roadway 1; Accident type, n.e.c. 1;
48	329 Nonmetallic Mineral Products	16	12.4620	Contact with radiation or caustics, by inhalation 7; Struck by, n.e.c. 2; Struck against stationary object 1; Struck by, uns. 1; Overexertion by wielding, holding, carrying objects 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by absorption 1; Non classifiable 1;
49	333 Primary Nonferrous Metals	7	12.1254	Struck against, uns. 1; Struck against stationary object 1; Fall to lower level, n.e.c. 1; Contact with electric current 1; Contact with temp. extremes, uns. 1; Contact with radiation or caustics, uns. 1; Explosions, uns. 1;
50	235 Hats, Caps, and Millinery	2	11.9546	Overexertion by pulling or pushing objects 1; Motor vehicle accident, uns. 1;
51	245 Wood Buildings, Mobile Homes	8	11.1142	Motor vehicle accident, uns. 2; Struck by, uns. 1; Contact with electric current 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, non collision, uns. 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1;
52	243 Millwork, Plywood, etc.	24	11.0477	Struck by falling object 4; Overexertion by wielding, holding, carrying objects 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, stationary object, uns. 2; Struck against moving object 1; Struck by, n.e.c. 1; Fall from ladder 1; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Caught in, under, between, uns. 1; Caught between moving and stationary objects 1; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Contact with electric current 1; Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, uns. 1; Motor vehicle accident, non collision, ran off roadway 1; Accident type, n.e.c. 1;
53	651 Real Estate Operators	51	10.5838	Overexertion by wielding, holding, carrying objects 12; Struck by flying object 5; Struck by, n.e.c. 5; Contact with radiation or caustics, by inhalation 5; Accident type, n.e.c. 4; Overexertion by lifting objects 3; Overexertion, n.e.c. 3; Fall from ladder 2; Contact with temp. extremes, hot objects 2; Explosions, uns. 2; Struck against moving object 1; Fall on stairs 1; Caught between moving and stationary objects 1; Bodily reaction, uns. 1; Overexertion by pulling or pushing objects 1; Contact with electric current 1; Non-highway vehicle accident, overturned vehicle 1; Non classifiable 1;
54	517 Oil and Petroleum Products	23	10.5699	Motor vehicle accident, uns. 4; Struck by, n.e.c. 2; Overexertion by wielding, holding, carrying objects 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, both in motion, uns. 2; Accident type, n.e.c. 2; Struck by, uns. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by ingestion 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1; Explosions, uns. 1;
55	411 Local and Suburban Transport	9	10.4433	Motor vehicle accident, uns. 2; Struck by, n.e.c. 1; Fall into shaft, etc. 1; Overexertion by wielding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, stationary object in roadway 1; Accident type, n.e.c. 1;
56	173 Electrical Work	45	10.2203	Contact with electric current 12; Overexertion by wielding, holding, carrying objects 6; Struck by flying object 3; Struck by, n.e.c. 3; Fall from scaffold, etc. 3; Fall from ladder 3; Fall to lower level, n.e.c. 3; Accident type, n.e.c. 3; Overexertion by pulling or pushing objects 2; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, sudden stop or start 1; Non classifiable 1;
57	526 Retail Garden Stores	6	10.2041	Struck by, n.e.c. 1; Caught in, under, between, n.e.c. 1; Overexertion, n.e.c. 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1;
58	514 Groceries and Related Products	69	10.0503	Overexertion by lifting objects 9; Overexertion by wielding, holding, carrying objects 8; Accident type, n.e.c. 7; Struck by flying object 6; Motor vehicle accident, both in motion, oncoming 4; Overexertion by pulling or pushing objects 3; Aircraft accident 3; Motor vehicle accident, both in motion, uns. 3; Motor vehicle accident, non collision, overturned 3; Motor vehicle accident, non collision, ran off roadway 3; Struck by, n.e.c. 2; Fall onto walkway, etc. 2; Fall onto or against objects 2; Motor vehicle accident, uns. 2; Motor vehicle accident, standing vehicle on side of road 2; Non classifiable 2; Struck by falling object 1; Fall from vehicle 1; Overexertion, n.e.c. 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, struck while standing in roadway 1;
59	251 Household Furniture	30	9.9920	Contact with temp. extremes, hot objects 4; Struck by, n.e.c. 3; Fall from elevation, uns. 2; Contact with radiation or caustics, by inhalation 2; Explosions, uns. 2; Accident type, n.e.c. 2; Struck against moving object 1; Struck by flying object 1; Fall to lower level, n.e.c. 1; Caught in, under, between, uns. 1; Caught in running or meshing objects 1; Rubbed or abraded by repetition of pressure 1; Overexertion, uns. 1; Overexertion by lifting objects 1; Overexertion, n.e.c. 1; Contact with electric current 1; Aircraft accident 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, overturned 1;
60	554 Gasoline Service Stations	52	9.9195	Struck by flying object 21; Struck by, n.e.c. 5; Motor vehicle accident, non collision, overturned 4; Accident type, n.e.c. 4;

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<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
60 554	Gasoline Service Stations (Cont.)			Contact with radiation or caustics, by inhalation 3; Caught in, under, between, n.e.c. 2; Contact with temp. extremes, hot objects 2; Struck against moving object 1; Struck by falling object 1; Fall onto walkway, etc. 1; Caught between two or more moving objects 1; Overexertion by lifting objects 1; Overexertion by wielding, holding, carrying objects 1; Aircraft accident 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, other non collision 1;
61 281	Industrial and Inorganic Chemicals	15	9.7892	Struck by, n.e.c. 2; Fall from ladder 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, both in motion, uns. 2; Explosions, uns. 2; Accident type, n.e.c. 2; Overexertion by lifting objects 1; Contact with temp. extremes, hot objects 1; Non classifiable 1;
62 289	Miscellaneous Chemical Products	9	9.7434	Contact with temp. extremes, hot objects 4; Explosions, uns. 2; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, oncoming 1; Accident type, n.e.c. 1;
63 415	School Buses	8	9.7123	Overexertion by wielding, holding, carrying objects 1; Overexertion, n.e.c. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1; Accident type, n.e.c. 1;
64 518	Beer, Wine, Distilled Liquors	14	9.6658	Overexertion by lifting objects 4; Overexertion by wielding, holding, carrying objects 2; Caught in, under, between, n.e.c. 1; Overexertion, n.e.c. 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1;
65 751	Auto Rentals, without Drivers	12	9.5763	Motor vehicle accident, uns. 3; Overexertion by wielding, holding, carrying objects 2; Struck by falling object 1; Struck by flying object 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1;
66 519	Miscellaneous Non durable Goods	38	9.4511	Struck by, n.e.c. 4; Accident type, n.e.c. 4; Contact with electric current 3; Struck by flying object 2; Caught between moving and stationary objects 2; Caught in or under collapsing materials 2; Caught in, under, between, n.e.c. 2; Overexertion by lifting objects 2; Overexertion by wielding, holding, carrying objects 2; Contact with radiation or caustics, by inhalation 2; Struck by falling object 1; Fall to lower level, n.e.c. 1; Caught in running or meshing objects 1; Overexertion by pulling or pushing objects 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1;
67 271	Newspapers	41	9.4342	Overexertion by wielding, holding, carrying objects 10; Struck by, n.e.c. 9; Motor vehicle accident, uns. 4; Overexertion by lifting objects 3; Struck by falling object 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, stationary object in roadway 2; Motor vehicle accident, standing vehicle on side of road 2; Motor vehicle accident, non collision, overturned 2; Accident type, n.e.c. 2; Fall from vehicle 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, non collision, uns. 1;
68 546	Retail Bakeries	13	9.3223	Overexertion by lifting objects 4; Struck by, n.e.c. 2; Overexertion by wielding, holding, carrying objects 2; Contact with radiation or caustics, by inhalation 2; Fall on stairs 1; Motor vehicle accident, both in motion, uns. 1; Accident type, n.e.c. 1;
69 319	Leather Goods, n.e.c.	1	9.1659	Overexertion by lifting objects 1;
70 237	Fur Goods	2	9.1324	Overexertion by wielding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1;
71 471	Freight Forwarding	5	9.1274	Accident type, n.e.c. 2; Struck by, n.e.c. 1; Fall into shaft, etc. 1; Overexertion by lifting objects 1;
72 515	Farm-Product Raw Materials	13	9.0776	Caught between moving and stationary objects 2; Struck against stationary object 1; Struck by falling object 1; Fall onto walkway, etc. 1; Contact with radiation or caustics, uns. 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, struck while standing in roadway 1; Explosions, uns. 1; Accident type, n.e.c. 1;
73 208	Beverages	20	8.8641	Overexertion by wielding, holding, carrying objects 3; Overexertion by lifting objects 2; Overexertion by pulling or pushing objects 2; Contact with radiation or caustics, by inhalation 2; Accident type, n.e.c. 2; Struck by, n.e.c. 1; Fall into shaft, etc. 1; Fall onto or against objects 1; Caught in, under, between, uns. 1; Caught in, under, between, n.e.c. 1; Bodily reaction, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Non classifiable 1;
74 249	Miscellaneous Wood Products	7	8.8563	Caught in, under, between, n.e.c. 2; Struck by falling object 1; Contact with electric current 1; Contact with temp. extremes, general heat 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
75 252	Office Furniture	5	8.8355	Contact with radiation or caustics, by inhalation 2; Caught in running or meshing objects 1; Caught between moving and stationary objects 1; Aircraft accident 1;
76 175	Carpentering and Flooring	13	8.8345	Struck by, n.e.c. 2; Struck by falling object 1; Fall from scaffold, etc. 1; Fall on same level, uns. 1; Caught between moving and stationary objects 1;

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<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
76	175 Carpentering and Flooring (Cont)			Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Accident type, n.e.c. 1;
77	226 Textile Finishing, except Wool	6	8.7899	Caught in, under, between objects 2; Struck by flying object 1; Fall from ladder 1; Overexertion by lifting objects 1; Contact with radiation or caustics, by absorption 1;
78	152 Residential Building Construction.	52	8.7212	Overexertion by welding, holding, carrying objects 6; Struck by falling object 5; Fall to lower level, n.e.c. 5; Contact with electric current 5; Struck by, n.e.c. 4; Caught in, under, between, n.e.c. 2; Overexertion, n.e.c. 2; Contact with temp. extremes, hot objects 2; Motor vehicle accident, vehicles moving in intersection 2; Accident type, n.e.c. 2; Struck against moving object 1; Struck by, uns. 1; Fall from scaffold, etc. 1; Fall from ladder 1; Fall on stairs 1; Fall into shaft, etc. 1; Fall onto or against objects 1; Rubbed or abraded by leaning, kneeling, etc. 1; Overexertion by lifting objects 1; Contact with temp. extremes, uns. 1; Contact with temp. extremes, general heat 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
79	653 Real Estate Agents, Managers	34	8.4756	Struck by flying object 5; Contact with radiation or caustics, by inhalation 4; Accident type, n.e.c. 4; Struck against stationary object 2; Struck by falling object 2; Struck by, n.e.c. 2; Overexertion, n.e.c. 2; Aircraft accident 2; Explosions, uns. 2; Fall from ladder 1; Fall on stairs 1; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Overexertion by welding, holding, carrying objects 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, overturned 1;
80	399 Miscellaneous Manufactures	11	8.2800	Struck by, n.e.c. 2; Motor vehicle accident, stationary object in roadway 2; Struck against moving object 1; Fall from ladder 1; Fall onto walkway, etc. 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1; Explosions, uns. 1; Non classifiable 1;
81	229 Miscellaneous Textile Goods	5	8.1820	Contact with radiation or caustics, by inhalation 2; Overexertion by lifting objects 1; Contact with electric current 1; Motor vehicle accident, both in motion, uns. 1;
82	201 Meat Products	29	8.0692	Accident type, n.e.c. 4; Struck by, n.e.c. 3; Motor vehicle accident, both in motion, oncoming 3; Fall onto walkway, etc. 2; Caught between moving and stationary objects 2; Overexertion by welding, holding, carrying objects 2; Motor vehicle accident, non collision, ran off roadway 2; Struck against moving object 1; Struck by falling object 1; Fall on stairs 1; Fall to lower level, n.e.c. 1; Overexertion by lifting objects 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, non collision, overturned 1; Explosions, uns. 1;
83	794 Commercial Sports	6	7.9766	Fall to lower level, n.e.c. 2; Struck by, n.e.c. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1;
84	282 Plastics, Synthetic Materials	15	7.9605	Contact with radiation or caustics, by inhalation 4; Explosions, uns. 4; Struck by flying object 2; Struck by, n.e.c. 1; Fall from scaffold, etc. 1; Fall onto walkway, etc. 1; Contact with electric current 1; Aircraft accident 1;
85	336 Nonferrous Foundries	7	7.9177	Contact with radiation or caustics, by inhalation 4; Struck by flying object 1; Struck by, n.e.c. 1; Caught in, under, between, uns. 1;
86	762 Electrical Repair Shops	7	7.8047	Overexertion by lifting objects 2; Contact with temp. extremes, hot objects 2; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Accident type, n.e.c. 1;
87	153 Operative Builders	5	7.7006	Fall from piled materials 1; Fall into shaft, etc. 1; Fall to lower level, n.e.c. 1; Aircraft accident 1; Non classifiable 1;
88	104 Gold and Silver Ores	4	7.6923	Struck by falling object 2; Contact with radiation or caustics, n.e.c. 2;
89	347 Metal Services, n.e.c.	8	7.6039	Contact with radiation or caustics, by inhalation 4; Fall to lower level, n.e.c. 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by absorption 1; Contact with radiation or caustics, n.e.c. 1;
90	753 Automotive Repair Shops	29	7.4518	Overexertion by welding, holding, carrying objects 5; Accident type, n.e.c. 4; Struck by falling object 2; Struck by flying object 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, uns. 2; Motor vehicle accident, non collision, overturned 2; Explosions, uns. 2; Struck against, uns. 1; Struck by, n.e.c. 1; Fall from vehicle 1; Overexertion by lifting objects 1; Overexertion, n.e.c. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, non collision, ran off roadway 1;
91	317 Handbags and Leather Goods	2	7.3937	Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1;
92	138 Oil and Gas Field Services	24	7.3894	Motor vehicle accident, uns. 5; Struck by falling object 3; Aircraft accident 2; Motor vehicle accident, both in motion, oncoming 2; Motor vehicle accident, non collision, uns. 2; Struck against, uns. 1; Struck by flying object 1; Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Caught in, under, between, uns. 1; Caught in, under, between, n.e.c. 1; Contact with electric current 1; Motor vehicle accident, stationary object, uns. 1; Explosions, uns. 1; Accident type, n.e.c. 1;
93	451 Certified Air Transportation	32	7.2651	Aircraft accident 16; Struck by, n.e.c. 4; Accident type, n.e.c. 4; Struck against stationary object 2; Transportation accident, not motor vehicle, uns. 2; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, stationary object in roadway 1;

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<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
94 291	Petroleum Refining	11	7.2074	Struck by, n.e.c. 2; Motor vehicle accident, uns. 2; Motor vehicle accident, both in motion, uns. 2; Struck by flying object 1; Overexertion by welding, holding, carrying objects 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Accident type, n.e.c. 1;
95 352	Farm and Garden Machinery	10	7.2015	Aircraft accident 3; Struck by, n.e.c. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1; Explosions, uns. 1;
96 391	Jewelry, Silverware, etc.	4	7.1339	Struck by flying object 1; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1;
97 316	Luggage	1	7.1174	Overexertion by lifting objects 1;
98 331	Basic Steel Products	29	6.9836	Contact with radiation or caustics, by inhalation 7; Struck by falling object 4; Struck by, n.e.c. 4; Overexertion by welding, holding, carrying objects 3; Contact with temp. extremes, hot objects 3; Aircraft accident 2; Struck against stationary object 1; Fall to lower level, n.e.c. 1; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Explosions, uns. 1; Non classifiable 1;
99 863	Labor Organizations	10	6.9725	Accident type, n.e.c. 3; Struck by flying object 1; Caught in or under collapsing materials 1; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, ran off roadway 1; Explosions, uns. 1;
100 353	Construction Machinery	22	6.8587	Struck by, n.e.c. 4; Contact with radiation or caustics, by inhalation 4; Non classifiable 3; Caught in, under, between, n.e.c. 2; Fall from vehicle 1; Fall on stairs 1; Fall to lower level, n.e.c. 1; Caught in or under collapsing materials 1; Overexertion by pulling or pushing objects 1; Aircraft accident 1; Motor vehicle accident, uns. 1; Explosions, uns. 1; Accident type, n.e.c. 1;
101 504	Sporting, Toy, and Hobby Goods	5	6.8204	Overexertion by welding, holding, carrying objects 2; Caught between moving and stationary objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, standing vehicle on side of road 1;
102 286	Industrial Organic Chemicals	11	6.6910	Contact with radiation or caustics, by inhalation 4; Contact with radiation or caustics, by absorption 3; Struck by, n.e.c. 1; Caught in, under, between, n.e.c. 1; Explosions, uns. 1; Non classifiable 1;
103 344	Structural Metal Products	31	6.5568	Contact with radiation or caustics, by inhalation 5; Accident type, n.e.c. 5; Struck by, n.e.c. 3; Struck by falling object 2; Explosions, uns. 2; Struck against stationary object 1; Fall into shaft, etc. 1; Fall to lower level, n.e.c. 1; Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by absorption 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
104 636	Title Insurance	3	6.2552	Motor vehicle accident, uns. 1; Motor vehicle accident, stationary object in roadway 1; Accident type, n.e.c. 1;
105 323	Products of Purchased Glass	3	6.2513	Overexertion by lifting objects 2; Motor vehicle accident, non collision, overturned 1;
106 821	Elementary, Secondary Schools	19	6.1915	Overexertion by welding, holding, carrying objects 5; Contact with radiation or caustics, by inhalation 3; Fall onto walkway, etc. 2; Contact with temp. extremes, general cold 2; Accident type, n.e.c. 2; Fall from ladder 1; Fall to lower level, n.e.c. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, non collision, ran off roadway 1;
107 287	Agricultural Chemicals	4	6.1595	Caught in or under collapsing materials 2; Contact with electric current 1; Motor vehicle accident, struck while standing in roadway 1;
108 592	Liquor Stores	8	6.0569	Struck by flying object 4; Overexertion by lifting objects 2; Struck by, n.e.c. 1; Motor vehicle accident, uns. 1;
109 209	Foods and Kindred Products	10	6.0485	Contact with radiation or caustics, by inhalation 2; Struck by flying object 1; Struck by, n.e.c. 1; Fall from vehicle 1; Bodily reaction, uns. 1; Overexertion by pulling or pushing objects 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, both in motion, uns. 1; Accident type, n.e.c. 1;
110 238	Miscellaneous Apparel and Accessories	3	6.0108	Struck by, n.e.c. 1; Overexertion by lifting objects 1; Motor vehicle accident, standing vehicle on side of road 1;
111 483	Radio and TV Broadcasting	13	5.9955	Non classifiable 3; Overexertion by welding, holding, carrying objects 2; Motor vehicle accident, non collision, ran off roadway 2; Struck by flying object 1; Fall to lower level, n.e.c. 1; Contact with radiation or caustics, by inhalation 1; Aircraft accident 1; Motor vehicle accident, non collision, uns. 1; Accident type, n.e.c. 1;
112 341	Metal Shipping Containers	4	5.9880	Struck by falling object 2; Caught between moving and stationary objects 1; Overexertion by lifting objects 1;
113 572	Household Appliance Stores	5	5.9801	Overexertion by welding, holding, carrying objects 2; Overexertion by lifting objects 1; Motor vehicle accident, both in motion, uns. 1; Accident type, n.e.c. 1;
114 553	Auto and Home Supply Stores	16	5.7893	Struck by flying object 4; Overexertion by welding, holding, carrying objects 2; Motor vehicle accident, uns. 2; Struck by, n.e.c. 1; Overexertion by lifting objects 1; Overexertion, n.e.c. 1; Aircraft accident 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Accident type, n.e.c. 1; Non classifiable 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
115 721	Laundry, Cleaning, etc. Services	21	5.7837	Accident type, n.e.c. 4; Overexertion by lifting objects 3; Overexertion by pulling or pushing objects 3; Struck by flying object 2; Struck by, n.e.c. 2; Fall from ladder 1; Fall onto walkway, etc. 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
116 545	Dairy Products Stores	2	5.6850	Struck by flying object 1; Overexertion by welding, holding, carrying objects 1;
117 599	Retail Stores, n.e.c.	16	5.5946	Contact with radiation or caustics, by inhalation 6; Struck by flying object 2; Struck by, n.e.c. 2; Fall from scaffold, etc. 1; Overexertion by lifting objects 1; Aircraft accident 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Non classifiable 1;
118 505	Metals and Minerals, except Oil	8	5.5425	Struck by, uns. 1; Struck by flying object 1; Fall from scaffold, etc. 1; Caught in, under, between, n.e.c. 1; Contact with radiation or caustics, by inhalation 1; Aircraft accident 1; Motor vehicle accident, non collision, ran off roadway 1; Non classifiable 1;
119 511	Paper and Paper Products	9	5.5354	Overexertion by welding, holding, carrying objects 4; Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Aircraft accident 1; Motor vehicle accident, standing vehicle on side of road 1; Accident type, n.e.c. 1;
120 239	Miscellaneous Fabricated Textiles	10	5.5215	Struck by falling object 2; Struck by, n.e.c. 2; Motor vehicle accident, both in motion, oncoming 2; Fall from scaffold, etc. 1; Bodily reaction, uns. 1; Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1;
121 726	Funeral Service, Crematories	4	5.4938	Fall into shaft, etc. 1; Fall onto walkway, etc. 1; Overexertion by lifting objects 1; Motor vehicle accident, both in motion, uns. 1;
122 734	Services to Buildings	31	5.4836	Fall to lower level, n.e.c. 6; Struck by, n.e.c. 4; Overexertion by welding, holding, carrying objects 3; Overexertion by lifting objects 2; Contact with electric current 2; Motor vehicle accident, both in motion, oncoming 2; Accident type, n.e.c. 2; Struck by falling object 1; Struck by flying object 1; Fall from scaffold, etc. 1; Fall into shaft, etc. 1; Caught in running or meshing objects 1; Caught in, under, between, n.e.c. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1;
123 223	Weaving Mills, Wool	1	5.4645	Overexertion by welding, holding, carrying objects 1;
124 355	Special Industry Machinery	10	5.4437	Contact with radiation or caustics, by inhalation 4; Struck by falling object 1; Struck by, n.e.c. 1; Caught between moving and stationary objects 1; Contact with electric current 1; Contact with radiation or caustics, by ingestion 1; Accident type, n.e.c. 1;
125 491	Electric Services	22	5.2556	Contact with electric current 10; Accident type, n.e.c. 4; Fall to lower level, n.e.c. 2; Struck by, n.e.c. 1; Fall from elevation, uns. 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, uns. 1;
126 525	Hardware Stores	8	5.2514	Struck by, n.e.c. 3; Struck by falling object 1; Struck by flying object 1; Overexertion by welding, holding, carrying objects 1; Contact with electric current 1; Aircraft accident 1;
127 703	Camps and Trailing Parks	8	5.1982	Motor vehicle accident, uns. 4; Struck by, n.e.c. 2; Fall to lower level, n.e.c. 1; Contact with temp. extremes, hot objects 1;
128 566	Shoe Stores	10	5.1298	Struck by flying object 2; Struck by, n.e.c. 2; Fall on stairs 1; Fall onto walkway, etc. 1; Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Non classifiable 1;
129 393	Musical Instruments	1	5.1046	Accident type, n.e.c. 1;
130 508	Machinery, Equipment, and Supplies	69	5.0905	Contact with radiation or caustics, by inhalation 10; Motor vehicle accident, uns. 7; Accident type, n.e.c. 6; Aircraft accident 5; Struck by, n.e.c. 4; Overexertion by lifting objects 3; Motor vehicle accident, both in motion, oncoming 3; Motor vehicle accident, vehicles moving in intersection 3; Motor vehicle accident, non collision, ran off roadway 3; Struck by falling object 2; Struck by flying object 2; Fall to lower level, n.e.c. 2; Overexertion by welding, holding, carrying objects 2; Overexertion, n.e.c. 2; Contact with temp. extremes, hot objects 2; Motor vehicle accident, both in motion, uns. 2; Motor vehicle accident, standing vehicle on side of road 2; Motor vehicle accident, non collision, overturned 2; Fall from vehicle 1; Caught between moving and stationary objects 1; Contact with electric current 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, struck while standing in roadway 1; Non classifiable 1;
131 474	Rental of Railroad Cars	2	5.0891	Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, standing vehicle on side of road 1;
132 346	Metal Forging and Stampings	13	5.0883	Overexertion by welding, holding, carrying objects 3; Aircraft accident 2; Accident type, n.e.c. 2; Struck by, n.e.c. 1; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Overexertion by lifting objects 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics, by absorption 1;
133 351	Engines and Turbines	6	5.0757	Struck by, n.e.c. 2; Accident type, n.e.c. 2; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1;
134 381	Scientific Instruments	4	5.0736	Accident type, n.e.c. 2; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1;
135 203	Preserved Fruits and Vegetables	12	5.0289	Fall from ladder 2; Caught in or under collapsing materials 2; Caught in running or meshing objects 1; Caught in, under, between, n.e.c. 1; Bodily reaction - involuntary motions 1; Overexertion by welding, holding, carrying objects 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
135 203	Preserved Fruits and Vegetables (Cont.)			Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, overturned 1;
136 265	Paperboard Containers	10	4.9831	Overexertion by lifting objects 2; Accident type, n.e.c. 2; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Motor vehicle accident, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, standing vehicle on side of road 1; Non classifiable 1;
137 506	Electrical Goods	22	4.9709	Overexertion by welding, holding, carrying objects 3; Accident type, n.e.c. 3; Contact with electric current 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, stationary object in roadway 2; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by absorption 1; Aircraft accident 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
138 264	Miscellaneous Converted Paper Products	11	4.9136	Caught between moving and stationary objects 2; Overexertion, n.e.c. 2; Accident type, n.e.c. 2; Caught in, under, between, n.e.c. 1; Overexertion by lifting objects 1; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1;
139 326	Pottery and Related Products	2	4.8674	Contact with radiation or caustics, by inhalation 2;
140 501	Motor Vehicles and Automotive Equipment	20	4.8604	Motor vehicle accident, uns. 2; Explosions, uns. 2; Accident type, n.e.c. 2; Struck by, n.e.c. 1; Fall from scaffold, etc. 1; Fall on stairs 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Aircraft accident 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1;
141 521	Lumber, Other Building Materials	16	4.7787	Struck by falling object 3; Struck by flying object 1; Struck by, n.e.c. 1; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Caught between moving and stationary objects 1; Overexertion by welding, holding, carrying objects 1; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1; Non classifiable 1;
142 307	Miscellaneous Plastics Products	24	4.7768	Caught in, under, between, n.e.c. 5; Overexertion by lifting objects 3; Contact with radiation or caustics, by inhalation 3; Struck by flying object 2; Struck by, n.e.c. 2; Overexertion by welding, holding, carrying objects 2; Struck against stationary object 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by absorption 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, other non collision 1; Accident type, n.e.c. 1;
143 739	Miscellaneous Business Services	77	4.7695	Struck by flying object 22; Struck by, n.e.c. 12; Motor vehicle accident, uns. 7; Accident type, n.e.c. 5; Struck by falling object 3; Fall on stairs 2; Fall onto walkway, etc. 2; Bodily reaction, uns. 2; Overexertion by lifting objects 2; Contact with electric current 2; Aircraft accident 2; Motor vehicle accident, both in motion, uns. 2; Explosions, uns. 2; Fall from elevation, uns. 1; Fall from ladder 1; Fall to lower level, n.e.c. 1; Fall on same level, uns. 1; Overexertion by pulling or pushing objects 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics, by ingestion 1; Transportation accident, not motor vehicle, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, ran off roadway 1;
144 233	Women's and Misses' Outerwear	19	4.7680	Overexertion by lifting objects 9; Overexertion by welding, holding, carrying objects 3; Accident type, n.e.c. 3; Struck by, n.e.c. 1; Overexertion by pulling or pushing objects 1; Overexertion, n.e.c. 1; Motor vehicle accident, both in motion, uns. 1;
145 502	Furniture and Home Furnishings	6	4.5910	Overexertion by lifting objects 2; Struck against stationary object 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, standing vehicle on side of road 1; Accident type, n.e.c. 1;
146 356	General Industry Machinery	13	4.4720	Contact with radiation or caustics, by inhalation 5; Aircraft accident 2; Motor vehicle accident, both in motion, oncoming 2; Explosions, uns. 2; Fall onto walkway, etc. 1; Overexertion by welding, holding, carrying objects 1;
147 211	Cigarettes	2	4.4603	Struck by falling object 1; Struck by flying object 1;
148 507	Hardware, Plumbing, Heating Equipment	11	4.4446	Fall from scaffold, etc. 2; Overexertion by lifting objects 2; Non classifiable 2; Aircraft accident 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1; Accident type, n.e.c. 1;
149 571	Home Furnishings Stores	17	4.4217	Overexertion by welding, holding, carrying objects 7; Overexertion by lifting objects 3; Struck by falling object 2; Struck by flying object 2; Overexertion, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, ran off roadway 1;
150 573	Radio, TV, and Music Stores	8	4.3573	Motor vehicle accident, both in motion, oncoming 2; Struck by, n.e.c. 1; Overexertion by welding, holding, carrying objects 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
150 573	Radio, TV, and Music Stores (Cont.)			Contact with temp. extremes, general cold 1;
	Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1; Non classifiable 1;			
151 284	Soap, Cleaners and Toilet Goods	6	4.1970	Struck by flying object 1; Fall to lower level, n.e.c. 1; Bodily reaction, uns. 1; Overexertion by lifting objects 1; Contact with radiation or caustics, n.e.c. 1; Accident type, n.e.c. 1;
152 752	Automobile Parking	10	4.0584	Struck by, n.e.c. 4; Struck by flying object 2; Accident type, n.e.c. 2; Contact with radiation or caustics, by inhalation 1; Non classifiable 1;
153 358	Refrigeration, Service Machinery	7	4.0318	Overexertion by lifting objects 2; Struck against stationary object 1; Struck by, n.e.c. 1; Rubbed or abraded by repetition of pressure 1; Contact with temp. extremes, hot objects 1; Non classifiable 1;
154 561	Men's Clothing and Furnishings	5	3.9939	Struck by flying object 1; Struck by, n.e.c. 1; Overexertion by pulling or pushing objects 1; Overexertion by wielding, holding, carrying objects 1; Accident type, n.e.c. 1;
155 541	Grocery Stores	88	3.9402	Struck by flying object 28; Overexertion by wielding, holding, carrying objects 13; Struck by, n.e.c. 11; Overexertion by lifting objects 10; Accident type, n.e.c. 5; Overexertion by pulling or pushing objects 2; Contact with radiation or caustics, by inhalation 2; Aircraft accident 2; Motor vehicle accident, both in motion, oncoming 2; Exposure to noise, uns. 2; Non classifiable 2; Struck against stationary object 1; Fall onto walkway, etc. 1; Caught between moving and stationary objects 1; Contact with temp. extremes, general heat 1; Motor vehicle accident, uns. 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, ran off roadway 1;
156 516	Chemicals and Allied Products	5	3.9105	Struck by, n.e.c. 1; Overexertion by pulling or pushing objects 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, non collision, ran off roadway 1;
157 386	Photographic Equipment and Supplies	5	3.8559	Contact with radiation or caustics, by inhalation 3; Transportation accident, not motor vehicle, uns. 1; Aircraft accident 1;
158 342	Cutlery, Hand Tools, Hardware	6	3.8170	Struck by flying object 1; Struck by, n.e.c. 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, non collision, ran off roadway 1; Explosions, uns. 1; Non classifiable 1;
159 225	Knitting Mills	8	3.7534	Fall into shaft, etc. 2; Caught in running or meshing objects 1; Overexertion by lifting objects 1; Overexertion by wielding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Explosions, uns. 1; Accident type, n.e.c. 1;
160 891	Engineering, Architectural Services	22	3.6694	Accident type, n.e.c. 5; Struck by, n.e.c. 2; Contact with electric current 2; Motor vehicle accident, uns. 2; Motor vehicle accident, both in motion, uns. 2; Caught in or under collapsing materials 1; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Overexertion by wielding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Aircraft accident 1; Motor vehicle accident, stationary object in roadway 1; Motor vehicle accident, standing vehicle on side of road 1; Motor vehicle accident, non collision, overturned 1;
161 324	Cement, Hydraulic	1	3.6127	Fall to lower level, n.e.c. 1;
162 731	Advertising	6	3.6027	Struck by, n.e.c. 1; Fall from scaffold, etc. 1; Overexertion by wielding, holding, carrying objects 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, stationary object in roadway 1; Accident type, n.e.c. 1;
163 234	Women's and Children's Underwear	3	3.5373	Overexertion by lifting objects 2; Fall into shaft, etc. 1;
164 283	Drugs	7	3.5089	Contact with radiation or caustics, by inhalation 4; Struck by falling object 1; Fall into shaft, etc. 1; Motor vehicle accident, stationary object in roadway 1;
165 824	Correspondence and Vocational Schools	2	3.4370	Overexertion by wielding, holding, carrying objects 1; Motor vehicle accident, uns. 1;
166 783	Motion Picture Theaters	4	3.4347	Struck by flying object 1; Struck by, n.e.c. 1; Fall from scaffold, etc. 1; Overexertion by lifting objects 1;
167 478	Miscellaneous Transportation Services	3	3.4208	Struck by, n.e.c. 1; Overexertion by lifting objects 1; Accident type, n.e.c. 1;
168 349	Miscellaneous Metal Products	8	3.3409	Contact with radiation or caustics, by inhalation 3; Struck by flying object 1; Fall into shaft, etc. 1; Contact with electric current 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1;
169 278	Blankbooks and Book Binding	2	3.1333	Struck by, n.e.c. 1; Overexertion by lifting objects 1;
170 523	Paint, Glass, Wallpaper Stores	2	3.1274	Caught in or under collapsing materials 1; Contact with radiation or caustics, by inhalation 1;
171 254	Partitions and Fixtures	2	3.1270	Overexertion by lifting objects 1; Contact with electric current 1;
172 259	Miscellaneous Furniture, Fixtures	1	3.1230	Overexertion by lifting objects 1;
173 314	Footwear, Except Rubber	4	3.1145	Struck by, n.e.c. 1; Fall on same level, n.e.c. 1; Overexertion by wielding, holding, carrying objects 1; Accident type, n.e.c. 1;
174 543	Fruit and Vegetable Markets	4	3.1104	Struck by flying object 1; Fall onto walkway, etc. 1; Overexertion by lifting objects 1; Contact with electric current 1;
175 701	Hotels, Motels, Tourist Courts	35	3.1020	Struck by flying object 10; Overexertion by wielding, holding, carrying objects 4; Struck by, n.e.c. 3; Contact with temp. extremes, hot objects 3; Struck by falling object 2; Fall from ladder 2; Contact with radiation or caustics, by inhalation 2; Accident type, n.e.c. 2;

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<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
175	701 Hotels, Motels, Tourist Courts (Cont)			Fall from scaffold, etc. 1; Fall from vehicle 1; Fall into shaft, etc. 1; Fall to lower level, n.e.c. 1; Fall onto or against objects 1; Motor vehicle accident, uns. 1; Non classifiable 1;
176	594 Miscellaneous Shopping Goods Stores	20	3.0677	Struck by flying object 5; Overexertion by lifting objects 3; Overexertion, n.e.c. 2; Accident type, n.e.c. 2; Struck by, n.e.c. 1; Fall onto walkway, etc. 1; Caught in or under collapsing materials 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, standing vehicle on side of road 1;
177	343 Plumbing and Heating, except Electrical	2	3.0502	Contact with radiation or caustics, by inhalation 2;
178	348 Ordinance and Accessories	2	3.0469	Explosions, uns. 1; Accident type, n.e.c. 1;
179	335 Nonferrous Rolling and Drawing	6	3.0257	Struck by, n.e.c. 2; Struck by falling object 1; Caught in, under, between, n.e.c. 1; Aircraft accident 1; Accident type, n.e.c. 1;
180	492 Gas Production and Distribution	5	3.0052	Motor vehicle accident, non collision, overturned 2; Struck by, n.e.c. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, vehicles moving in intersection 1;
181	539 General Merchandise Stores	4	2.9904	Struck by flying object 2; Struck by, n.e.c. 1; Non classifiable 1;
182	655 Subdividers and Developers	4	2.9715	Contact with electric current 2; Struck by flying object 1; Struck by, n.e.c. 1;
183	782 Cinema Distribution and Services	2	2.9674	Motor vehicle accident, both in motion, oncoming 1; Accident type, n.e.c. 1;
184	373 Ship and Boat Building and Repair	6	2.9360	Contact with radiation or caustics, by inhalation 2; Struck by falling object 1; Struck by, n.e.c. 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, non collision, overturned 1;
185	764 Upholstery, Furniture Repair	4	2.9347	Contact with radiation or caustics, by inhalation 2; Fall into shaft, etc. 1; Rubbed or abraded by repetition of pressure 1;
186	371 Motor Vehicles and Equipment	23	2.9090	Fall to lower level, n.e.c. 4; Struck by, n.e.c. 3; Contact with radiation or caustics, by inhalation 3; Accident type, n.e.c. 3; Caught between moving and stationary objects 2; Struck by falling object 1; Fall on same level, n.e.c. 1; Overexertion by lifting objects 1; Contact with electric current 1; Motor vehicle accident, uns. 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, stationary object in roadway 1; Non-highway vehicle accident, fall from vehicle 1;
187	222 Weaving Mills, Synthetics	3	2.8659	Fall from ladder 1; Fall from vehicle 1; Non classifiable 1;
188	395 Office and Art Supplies	1	2.8129	Overexertion by lifting objects 1;
189	306 Fabricated Rubber Products	3	2.8048	Fall from ladder 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, n.e.c. 1;
190	733 Mailing, Reproduction, Stenographic	4	2.7369	Struck by, n.e.c. 1; Overexertion by pulling or pushing objects 1; Contact with temp. extremes, general heat 1; Motor vehicle accident, non collision, overturned 1;
191	362 Electrical Industrial Apparatus	6	2.7350	Struck by flying object 2; Caught between moving and stationary objects 1; Caught between two or more moving objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1;
192	231 Men's and Boys' Suits and Coats	2	2.7219	Overexertion, n.e.c. 2;
193	322 Glassware, Pressed or Blown	3	2.6966	Contact with electric current 1; Motor vehicle accident, standing vehicle on side of road 1; Non classifiable 1;
194	446 Water Transportation Services	3	2.6918	Struck by falling object 1; Fall from scaffold, etc. 1; Overexertion by lifting objects 1;
195	603 Mutual Savings Banks	2	2.6638	Struck by flying object 1; Motor vehicle accident, uns. 1;
196	423 Trucking Terminal Facilities	1	2.6385	Motor vehicle accident, non collision, ran off roadway 1;
197	621 Security Brokers and Dealers	6	2.6227	Struck against stationary object 1; Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Bodily reaction, uns. 1; Motor vehicle accident, non collision, ran off roadway 1; Accident type, n.e.c. 1;
198	864 Civic and Social Associations	9	2.6205	Fall to lower level, n.e.c. 2; Struck by flying object 1; Struck by, n.e.c. 1; Fall on stairs 1; Overexertion by welding, holding, carrying objects 1; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics, n.e.c. 1;
199	472 Arrangement of Transport	4	2.6071	Struck by flying object 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, same direction 1; Accident type, n.e.c. 1;
200	361 Electric Distributing Equipment	3	2.5802	Struck by, n.e.c. 1; Contact with electric current 1; Motor vehicle accident, both in motion, oncoming 1;
201	839 Social Services, n.e.c.	6	2.5683	Motor vehicle accident, other non collision 2; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1;
202	385 Ophthalmic Goods	1	2.4125	Fall onto walkway, etc. 1;
203	832 Individual and Family Services	6	2.3907	Fall from ladder 2; Overexertion by lifting objects 2; Fall onto walkway, etc. 1; Accident type, n.e.c. 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
204	527 Mobile Home Dealers	4	2.3866	Aircraft accident 1; Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, sudden stop or start 1; Non classifiable 1;
205	615 Business Credit Institutions	1	2.3714	Motor vehicle accident, both in motion, same direction 1;
206	781 Cinema Production and Services	2	2.3156	Fall from vehicle 1; Overexertion by welding, holding, carrying objects 1;
207	633 Fire, Marine, and Casualty Insurance	11	2.2956	Motor vehicle accident, both in motion, oncoming 4; Struck by, n.e.c. 2; Accident type, n.e.c. 2; Fall to lower level, n.e.c. 1; Motor vehicle accident, both in motion, uns. 1; Non classifiable 1;
208	596 Nonstore Retailers	6	2.2543	Struck by, n.e.c. 1; Overexertion by pulling or pushing objects 1; Overexertion by welding, holding, carrying objects 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1;
209	861 Business Associations	2	2.2026	Struck by falling object 1; Accident type, n.e.c. 1;
210	396 Costume Jewelry and Notions	1	2.1612	Fall onto walkway, etc. 1;
211	359 Miscellaneous Machinery, except Electrical	6	2.1545	Struck against stationary object 1; Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Accident type, n.e.c. 1; Non classifiable 1;
212	213 Chewing and Smoking Tobacco	2	2.1505	Contact with temp. extremes, hot objects 2;
213	279 Printing Trade Services	1	2.1404	Accident type, n.e.c. 1;
214	481 Telephone Communication	21	2.1304	Struck by falling object 2; Fall to lower level, n.e.c. 2; Overexertion by welding, holding, carrying objects 2; Motor vehicle accident, uns. 2; Motor vehicle accident, both in motion, uns. 2; Accident type, n.e.c. 2; Struck by, n.e.c. 1; Fall from ladder 1; Bodily reaction, uns. 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, both in motion, same direction 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, standing vehicle on side of road 1; Explosions, uns. 1;
215	565 Family Clothing Stores	4	2.0880	Struck by, n.e.c. 2; Fall onto walkway, etc. 1; Aircraft accident 1;
216	272 Periodicals	2	2.0822	Aircraft accident 1; Motor vehicle accident, stationary object in roadway 1;
217	365 Radio and TV Receiving Equipment.	2	2.0708	Fall onto walkway, etc. 1; Overexertion by welding, holding, carrying objects 1;
218	131 Crude Oil and Natural Gas	5	2.0675	Motor vehicle accident, non collision, overturned 2; Struck by flying object 1; Struck by, n.e.c. 1; Caught in, under, between, n.e.c. 1;
219	275 Commercial Printing	9	2.0090	Overexertion by lifting objects 4; Struck by flying object 2; Struck by, n.e.c. 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1;
220	078 Landscap, Horticultural Services	18	1.9800	Fall to lower level, n.e.c. 3; Struck by falling object 2; Struck by, n.e.c. 2; Caught in or under collapsing materials 2; Overexertion by welding, holding, carrying objects 2; Contact with electric current 2; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Overexertion, n.e.c. 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, non collision, uns. 1;
221	357 Office and Computing Machines	9	1.9765	Motor vehicle accident, uns. 2; Struck by flying object 1; Fall from ladder 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics, by absorption 1; Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, struck while standing in roadway 1;
222	273 Books	2	1.9346	Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1;
223	121 Bituminous Coal and Lignite	23	1.9237	Struck by falling object 8; Caught in or under collapsing materials 5; Explosions, uns. 3; Struck by, uns. 1; Fall from vehicle 1; Fall to lower level, n.e.c. 1; Caught between moving and stationary objects 1; Caught in, under, between, n.e.c. 1; Contact with electric current 1; Transportation accident, not motor vehicle, n.e.c. 1;
224	635 Surety Insurance	1	1.9048	Struck by, n.e.c. 1;
225	369 Electrical Equipment and Supplies	3	1.8929	Fall onto walkway, etc. 1; Overexertion by lifting objects 1; Accident type, n.e.c. 1;
226	227 Floor Covering Mills	1	1.8292	Fall onto walkway, etc. 1;
227	394 Toys and Sporting Goods	2	1.8090	Fall to lower level, n.e.c. 1; Overexertion by welding, holding, carrying objects 1;
228	461 Pipe Lines, except Natural Gas	2	1.6653	Motor vehicle accident, uns. 1; Explosions, uns. 1;
229	562 Women's Ready-to-Wear Stores	6	1.6475	Fall onto or against objects 1; Overexertion, uns. 1; Overexertion by pulling or pushing objects 1; Overexertion by welding, holding, carrying objects 1; Aircraft accident 1; Motor vehicle accident, uns. 1;
230	833 Job Training and Related Services	3	1.5867	Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Accident type, n.e.c. 1;
231	736 Personnel Supply Services	11	1.5586	Explosions, uns. 2; Struck by falling object 1; Struck by, n.e.c. 1; Fall to lower level, n.e.c. 1; Caught in, under, between, n.e.c. 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, non collision, overturned 1; Accident type, n.e.c. 1;

Appendix D (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
232	221	Weaving Mills, Cotton	2	1.5569	Contact with electric current 1; Motor vehicle accident, struck while standing off roadway 1;
233	382	Measuring and Controlling Devices	4	1.5452	Struck by, n.e.c. 1; Caught between moving and stationary objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, uns. 1;
234	364	Electric Lighting and Wiring Equipment	3	1.4732	Fall from ladder 2; Contact with radiation or caustics, by inhalation 1;
235	552	Used Car Dealers	4	1.4342	Fall on same level, n.e.c. 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Aircraft accident 1;
236	602	Commercial and Stock Savings Banks	21	1.4226	Struck by flying object 3; Accident type, n.e.c. 3; Fall to lower level, n.e.c. 2; Fall onto walkway, etc. 2; Aircraft accident 2; Struck by, n.e.c. 1; Fall from ladder 1; Fall on stairs 1; Rubbed or abraded by leaning, kneeling, etc. 1; Overexertion by welding, holding, carrying objects 1; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1;
237	637	Pension, Health, and Welfare Funds	2	1.3633	Accident type, n.e.c. 2;
238	822	Colleges and Universities	10	1.3235	Accident type, n.e.c. 4; Struck against stationary object 1; Fall onto walkway, etc. 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by absorption 1; Aircraft accident 1; Motor vehicle accident, uns. 1;
239	632	Medical and Health Insurance	2	1.3181	Struck by, n.e.c. 1; Overexertion by welding, holding, carrying objects 1;
240	384	Medical Instruments, Supplies	2	1.2466	Contact with radiation or caustics, by inhalation 1; Aircraft accident 1;
241	555	Boat Dealers	2	1.2099	Non classifiable 2;
242	354	Metal Working Machinery	4	1.1961	Struck by flying object 1; Fall to lower level, n.e.c. 1; Caught in, under, between, n.e.c. 1; Contact with electric current 1;
243	805	Nursing, Care Facilities	13	1.1867	Overexertion by lifting objects 2; Overexertion by welding, holding, carrying objects 2; Aircraft accident 2; Non classifiable 2; Struck by falling object 1; Fall from ladder 1; Overexertion by pulling or pushing objects 1; Contact with radiation or caustics, by absorption 1; Accident type, n.e.c. 1;
244	531	Department Stores	22	1.1642	Fall onto walkway, etc. 4; Struck by falling object 3; Motor vehicle accident, both in motion, oncoming 3; Struck by flying object 2; Overexertion by welding, holding, carrying objects 2; Struck by, n.e.c. 1; Fall from scaffold, etc. 1; Fall into shaft, etc. 1; Overexertion, uns. 1; Overexertion by lifting objects 1; Overexertion, n.e.c. 1; Contact with radiation or caustics, uns. 1; Motor vehicle accident, non collision, ran off roadway 1;
245	591	Drug and Proprietary Stores	6	1.1588	Overexertion by lifting objects 3; Struck by flying object 1; Overexertion by welding, holding, carrying objects 1; Overexertion, n.e.c. 1;
246	836	Residential Care	3	1.1428	Bodily reaction, uns. 1; Contact with radiation or caustics, by ingestion 1; Non classifiable 1;
247	631	Life Insurance	6	1.1190	Aircraft accident 2; Motor vehicle accident, both in motion, oncoming 2; Fall onto walkway, etc. 1; Accident type, n.e.c. 1;
248	806	Hospitals	31	1.0802	Overexertion by lifting objects 5; Struck by flying object 3; Struck by, n.e.c. 3; Fall onto walkway, etc. 2; Fall onto or against objects 2; Overexertion by welding, holding, carrying objects 2; Contact with radiation or caustics, by inhalation 2; Contact with radiation or caustics, by absorption 2; Accident type, n.e.c. 2; Non classifiable 2; Fall from ladder 1; Fall into shaft, etc. 1; Fall to lower level, n.e.c. 1; Overexertion, n.e.c. 1; Motor vehicle accident, both in motion, oncoming 1; Explosions, uns. 1;
249	612	Savings and Loan Associations	3	1.0321	Caught in or under collapsing materials 1;
250	367	Electronic Components and Accessories	6	1.0228	Non classifiable 2; Overexertion by lifting objects 1; Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1; Contact with radiation or caustics, n.e.c. 1;
251	892	Non commercial Research Organizations	1	1.0146	Overexertion by welding, holding, carrying objects 1;
252	737	Computer and Data Processing Services	4	0.9968	Struck by flying object 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, stationary object in roadway 1;
253	793	Bowling and Billiards	1	0.9903	Fall from ladder 1;
254	345	Screw Machine Products, Bolts, etc.	1	0.9837	Aircraft accident 1;
255	614	Personal Credit Institutions	2	0.9572	Non classifiable 2;
256	807	Medical and Dental Labs	1	0.9466	Contact with radiation or caustics, by inhalation 1;
257	616	Mortgage Bankers and Brokers	1	0.9457	Motor vehicle accident, both in motion, oncoming 1;
258	549	Miscellaneous Food Stores	2	0.9447	Overexertion by lifting objects 1; Motor vehicle accident, uns. 1;
259	366	Communication Equipment	5	0.8990	Motor vehicle accident, uns. 2; Struck by flying object 1; Overexertion by pulling or pushing objects 1; Overexertion by welding, holding, carrying objects 1;
260	232	Men's and Boys' Furnishings	3	0.8766	Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, oncoming 1;

Appendix D (Cont.)

<i>Rank</i>	<i>Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
261	263	Paperboard Mills	3	0.8303	Struck by falling object 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1;
262	801	Offices of Physicians	7	0.8293	Struck against, uns. 1; Struck by flying object 1; Struck by, n.e.c. 1; Contact with radiation or caustics, by absorption 1; Contact with radiation or caustics, n.e.c. 1; Accident type, n.e.c. 1; Non classifiable 1;
263	802	Offices of Dentists	3	0.7779	Struck against stationary object 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1;
264	671	Holding Offices	3	0.7225	Struck by, n.e.c. 1; Bodily reaction, uns. 1; Motor vehicle accident, vehicles moving in intersection 1;
265	792	Orchestras and Entertainers	4	0.7041	Struck by, n.e.c. 2; Bodily reaction, uns. 1; Motor vehicle accident, uns. 1;
266	724	Barber Shops	1	0.6954	Explosions, uns. 1;
267	723	Beauty Shops	2	0.6502	Overexertion by welding, holding, carrying objects 1; Contact with radiation or caustics, by inhalation 1;
268	835	Child Day Care Services	2	0.6414	Struck by flying object 2;
269	363	Household Appliances	1	0.6408	Explosions, uns. 1;
270	372	Aircraft and Parts	4	0.6329	Overexertion by welding, holding, carrying objects 1; Motor vehicle accident, uns. 1; Explosions, uns. 1; Accident type, n.e.c. 1;
271	893	Accounting and Auditing	2	0.5565	Fall to lower level, n.e.c. 1; Overexertion by welding, holding, carrying objects 1;
272	563	Women's Specialty Stores	1	0.5208	Struck by, n.e.c. 1;
273	808	Outpatient Care Facilities	1	0.5030	Motor vehicle accident, uns. 1;
274	261	Pulp Mills	1	0.5018	Fall from vehicle 1;
275	641	Insurance Agents, Brokers and Service	15	0.4971	Overexertion by welding, holding, carrying objects 2; Aircraft accident 2; Accident type, n.e.c. 2; Struck by flying object 1; Struck by, n.e.c. 1; Fall from vehicle 1; Overexertion by lifting objects 1; Overexertion by pulling or pushing objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, standing vehicle on side of road 1;
276	754	Auto Services, Except Repair	2	0.4468	Contact with radiation or caustics, by inhalation 1; Accident type, n.e.c. 1;
277	862	Professional Organizations	1	0.4425	Motor vehicle accident, both in motion, uns. 1;
278	673	Trusts	1	0.4411	Fall to lower level, n.e.c. 1;
279	581	Eating and Drinking Places	123	0.4019	Struck by flying object 38; Overexertion by lifting objects 12; Accident type, n.e.c. 12; Overexertion by welding, holding, carrying objects 11; Struck by, n.e.c. 9; Contact with radiation or caustics, by inhalation 9; Non classifiable 5; Fall onto walkway, etc. 3; Motor vehicle accident, non collision, overturned 3; Overexertion, n.e.c. 2; Contact with temp. extremes, hot objects 2; Aircraft accident 2; Motor vehicle accident, uns. 2; Motor vehicle accident, both in motion, uns. 2; Struck by falling object 1; Fall on stairs 1; Fall into shaft, etc. 1; Fall to lower level, n.e.c. 1; Bodily reaction, uns. 1; Overexertion, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, non collision, uns. 1; Motor vehicle accident, non collision, ran off roadway 1; Exposure to noise, uns. 1;
280	811	Legal Services	13	0.3666	Struck by flying object 2; Overexertion by welding, holding, carrying objects 2; Aircraft accident 2; Fall on stairs 1; Fall to lower level, n.e.c. 1; Bodily reaction, uns. 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, other non collision 1; Accident type, n.e.c. 1;
281	866	Religious Organizations	12	0.2312	Accident type, n.e.c. 3; Overexertion by lifting objects 2; Motor vehicle accident, both in motion, oncoming 2; Fall from scaffold, etc. 1; Fall on stairs 1; Contact with radiation or caustics, n.e.c. 1; Motor vehicle accident, uns. 1; Motor vehicle accident, non collision, sudden stop or start 1;
282	804	Health Practitioners Office	1	0.1283	Overexertion by welding, holding, carrying objects 1;
283	401	Railroads	1	0.0378	Train accident 1;
NA	013	Field Crops, except Cash Grains	6	NA	Struck by, n.e.c. 1; Fall onto walkway, etc. 1; Contact with temp. extremes, hot objects 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, vehicles moving in intersection 1;
NA	017	Fruits and Tree Nuts	6	NA	Contact with radiation or caustics, by inhalation 2; Struck by, n.e.c. 1; Caught between moving and stationary objects 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
NA	018	Horticultural Specialties	9	NA	Struck by, n.e.c. 5; Fall to lower level, n.e.c. 1; Caught in or under collapsing materials 1; Contact with radiation or caustics, by inhalation 1; Accident type, n.e.c. 1;
NA	019	General Farms, Crop Farms	50	NA	Caught in, under, between, n.e.c. 7; Contact with electric current 5; Struck by falling object 4; Non classifiable 4; Struck by, n.e.c. 3; Fall from vehicle 3; Caught between moving and stationary objects 3; Accident type, n.e.c. 3; Fall to lower level, n.e.c. 2; Caught in, under, between, uns. 2; Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, standing vehicle on side of road 2; Fall from ladder 1; Fall onto or against objects 1; Caught in running or meshing objects 1; Caught between two or more moving objects 1; Contact with temp. extremes, general heat 1; Motor vehicle accident, uns. 1; Motor vehicle accident, vehicles moving in intersection 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
NA 019	General Farms, Crop Farms (Cont.)			Motor vehicle accident, stationary object, uns. 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1;
NA 021	Livestock, except Dairy, etc.	8	NA	Struck by flying object 1; Fall from scaffold, etc. 1; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, uns. 1; Motor vehicle accident, vehicles moving in intersection 1; Motor vehicle accident, non collision, ran off roadway 1; Non-highway vehicle accident, overturned vehicle 1;
NA 024	Dairy Farms	24	NA	Caught in, under, between, n.e.c. 4; Contact with radiation or caustics, by inhalation 4; Struck by falling object 2; Struck by, n.e.c. 2; Motor vehicle accident, uns. 2; Caught in running or meshing objects 1; Caught between moving and stationary objects 1; Overexertion by welding, holding, carrying objects 1; Contact with electric current 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, struck while standing in roadway 1; Motor vehicle accident, non collision, overturned 1; Motor vehicle accident, non collision, ran off roadway 1; Non-highway vehicle accident, overturned vehicle 1; Accident type, n.e.c. 1;
NA 027	Animal Specialties	2	NA	Struck by, n.e.c. 1; Contact with radiation or caustics, n.e.c. 1;
NA 072	Crop Services	4	NA	Fall to lower level, n.e.c. 1; Contact with electric current 1; Motor vehicle accident, non collision, overturned 1; Non classifiable 1;
NA 075	Animal Services, except Veterinary	3	NA	Struck by, n.e.c. 1; Fall onto or against objects 1; Motor vehicle accident, both in motion, oncoming 1;
NA 085	Forestry Services	6	NA	Aircraft accident 2; Motor vehicle accident, non collision, ran off roadway 2; Caught between moving and stationary objects 1; Motor vehicle accident, stationary object, uns. 1;
NA 105	Bauxite, Other Aluminum Ores	1	NA	Fall from scaffold, etc. 1;
NA 106	Ferroalloy Ores, except Vanadium	9	NA	Struck by falling object 2; Caught in or under collapsing materials 2; Contact with temp. extremes, hot objects 2; Fall into shaft, etc. 1; Caught between two or more moving objects 1; Caught in, under, between, n.e.c. 1;
NA 108	Metal Mining Services	8	NA	Aircraft accident 5; Struck against moving object 1; Fall into shaft, etc. 1; Motor vehicle accident, non collision, overturned 1;
NA 109	Miscellaneous Metal Ores	3	NA	Contact with radiation or caustics, by inhalation 2; Contact with radiation or caustics, n.e.c. 1;
NA 141	Dimension Stone	2	NA	Struck by falling object 1; Accident type, n.e.c. 1;
NA 149	Miscellaneous Nonmetallic Minerals	32	NA	Contact with radiation or caustics, by inhalation 30; Struck by falling object 1; Motor vehicle accident, non collision, overturned 1;
NA 214	Tobacco Stemming, Redrying	4	NA	Struck by falling object 1; Struck by flying object 1; Fall onto walkway, etc. 1; Contact with temp. extremes, general heat 1;
NA 266	Building Paper and Board Mills	3	NA	Fall from ladder 1; Contact with radiation or caustics, by inhalation 1; Motor vehicle accident, both in motion, uns. 1;
NA 442	Deep Sea Domestic Transport	1	NA	Overexertion by pulling or pushing objects 1;
NA 452	Non certified Air Transport	10	NA	Aircraft accident 9; Motor vehicle accident, both in motion, same direction 1;
NA 482	Telegraph Communication	1	NA	Contact with radiation or caustics, by inhalation 1;
NA 489	Communication Services, n.e.c.	2	NA	Aircraft accident 2;
NA 497	Irrigation Systems	2	NA	Struck by falling object 1; Explosions, uns. 1;
NA 559	Automotive Dealers, n.e.c.	8	NA	Aircraft accident 7; Motor vehicle accident, both in motion, uns. 1;
NA 593	Used Merchandise Stores	5	NA	Struck by flying object 1; Struck by, n.e.c. 1; Caught in, under, between, n.e.c. 1; Overexertion by welding, holding, carrying objects 1; Accident type, n.e.c. 1;
NA 601	Federal Reserve Banks	1	NA	Struck by flying object 1;
NA 605	Banking Functions	3	NA	Struck by flying object 2; Motor vehicle accident, both in motion, uns. 1;
NA 623	Security, Commodity Exchanges	1	NA	Overexertion by welding, holding, carrying objects 1;
NA 628	Security, Commodity Services	2	NA	Fall onto walkway, etc. 1; Contact with radiation or caustics, by inhalation 1;
NA 679	Miscellaneous Investing	2	NA	Caught in, under, between, n.e.c. 1; Accident type, n.e.c. 1;
NA 729	Miscellaneous Personal Services	2	NA	Struck by, n.e.c. 1; Accident type, n.e.c. 1;
NA 735	News Syndicates	1	NA	Contact with radiation or caustics, by inhalation 1;
NA 769	Miscellaneous Repair Shops	18	NA	Struck by falling object 2; Fall from scaffold, etc. 2; Overexertion by welding, holding, carrying objects 2; Contact with temp. extremes, hot objects 2; Motor vehicle accident, non collision, ran off roadway 2; Struck by flying object 1; Caught in or under collapsing materials 1; Overexertion, n.e.c. 1; Contact with electric current 1; Contact with radiation or caustics, by inhalation 1; Aircraft accident 1; Motor vehicle accident, stationary object in roadway 1; Accident type, n.e.c. 1;
NA 799	Miscellaneous Recreational Services	23	NA	Struck by falling object 3; Contact with electric current 2; Motor vehicle accident, non collision, overturned 2; Accident type, n.e.c. 2; Struck by flying object 1; Struck by, n.e.c. 1; Fall from ladder 1; Fall to lower level, n.e.c. 1;

Appendix D (Cont.)

<i>Rank Code</i>	<i>Industry</i>	<i>Deaths</i>	<i>Rate</i>	<i>Types of Injury or Illness</i>
NA 799	Miscellaneous Recreational Services (Cont.)			Caught between moving and stationary objects 1; Caught between two or more moving objects 1; Overexertion by lifting objects 1; Overexertion by wielding, holding, carrying objects 1; Overexertion, n.e.c. 1; Contact with temp. extremes, hot objects 1; Aircraft accident 1; Motor vehicle accident, uns. 1; Explosions, uns. 1; Non classifiable 1;
NA 809	Health and Allied Services	1	NA	Contact with radiation or caustics, by inhalation 1;
NA 829	Schools and Educational Services	4	NA	Aircraft accident 3; Struck by, n.e.c. 1;
NA 841	Museums and Art Galleries	1	NA	Overexertion by wielding, holding, carrying objects 1;
NA 842	Offices of Dentists	1	NA	Struck by, n.e.c. 1;
NA 869	Membership Organizations, n.e.c.	12	NA	Contact with radiation or caustics, by inhalation 2; Motor vehicle accident, non collision, overturned 2; Accident type, n.e.c. 2; Struck by, n.e.c. 1; Caught in or under collapsing materials 1; Contact with temp. extremes, hot objects 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, oncoming 1; Motor vehicle accident, stationary object in roadway 1;
NA 881	Private Households	6	NA	Fall from vehicle 1; Overexertion by pulling or pushing objects 1; Overexertion, n.e.c. 1; Motor vehicle accident, uns. 1; Motor vehicle accident, both in motion, uns. 1; Motor vehicle accident, both in motion, oncoming 1;
NA 899	Services, n.e.c.	2	NA	Motor vehicle accident, non collision, overturned 2;
NA 999	Non classifiable	42	NA	Motor vehicle accident, uns. 6; Overexertion by wielding, holding, carrying objects 5; Overexertion by lifting objects 4; Contact with radiation or caustics, by inhalation 4; Accident type, n.e.c. 4; Fall onto walkway, etc. 3; Overexertion by pulling or pushing objects 3; Struck against stationary object 2; Struck by falling object 2; Explosions, uns. 2; Non classifiable 2; Struck against, uns. 1; Struck by flying object 1; Struck by, n.e.c. 1; Contact with electric current 1; Motor vehicle accident, stationary object, uns. 1;

n.e.c. = not elsewhere classified

uns. = unspecified

Appendix E

Bureau of Labor Statistics
Job-Related Fatality Rates by Industry, 1979
Employers with 11 or More Employees

<i>Rank</i>	<i>S.I.C. Code</i>	<i>Description</i>	<i>Rate per 100,000</i>
1	241	Logging Camps and Contractors	123.87
2	179	Miscellaneous Special Contractors	70.34
3	138	Oil and Gas Field Services	68.73
4	178	Water Well Drilling	64.89
5	120	Bituminous Coal and Lignite	63.64
6	446	Water Transportation Services	58.95
7	080	Forestry	57.31
8	130	Oil and Gas Extraction	57.18
9	140	Nonmetal Minerals, except Fuels	53.26
10	161	Highway, Street Construction	53.19
11	440	Water Transportation	51.87
12	176	Roofing and Sheet Metal Work	51.16
13	160	Heavy Construction	45.73
14	162	Heavy Construction, except Highway	42.28
15	495	Sanitary Services	41.13
16	131	Crude Oil and Natural Gas	40.75
17	295	Paving and Roofing Materials	40.30
18	421	Trucking	34.81
19	100	Metal Mining	34.29
20	420	Trucking and Warehousing	33.01
21	172	Painting, Papering, Decorating	30.95
22	174	Masonry, Stonework, Plastering	30.91
23	170	Special Trade Contractors	30.64
24	327	Concrete and Plaster Products	29.98
25	478	Miscellaneous Transportation Services	28.34
26	240	Lumber and Wood Products	26.13
27	334	Secondary Nonferrous Metals	25.28
28	339	Miscellaneous Primary Metal Products	24.37
29	070	Agricultural Services	24.34
30	423	Trucking Terminal Facilities	23.86
31	242	Sawmills and Planing Mills	22.76
32	491	Electric Services	22.01
33	010-020	Agricultural Production	20.74
34	450	Transportation by Air	20.38
35	373	Ship and Boat Building and Repair	19.07
36	177	Concrete Work	18.65
37	244	Wood Containers	18.41
38	400	Railroad Transportation	18.34
39	243	Millwork, Plywood, etc.	18.14
40	521	Lumber, Other Building Materials	17.87
41	490	Electric, Gas, Sanitary Services	17.78
42	171	Plumbing, Heating, Air Conditioning	17.72
43	154	Nonresidential Construction	17.60
44	510	Wholesale Trade--Nondurable Goods	17.40
45	150	General Building Contractors	16.07
46	325	Structural Clay Products	15.82
47	375	Motorcycles, Bicycles and Parts	15.58
48	152	Residential Building Construction	15.48
49	324	Cement, Hydraulic	15.41
50	331	Basic Steel Products	15.02

Appendix E (Cont.)

<i>Rank</i>	<i>S.I.C. Code</i>	<i>Description</i>	<i>Rate per 100,000</i>
51	290	Petroleum and Coal Products	14.91
52	204	Grain Mill Products	14.53
52	320	Stone, Clay and Glass Products	14.53
53	520	Building Materials and Garden Supplies	13.07
54	206	Confectionery Products	12.88
55	332	Iron and Steel Foundries	12.86
56	330	Primary Metal Industries	12.44
57	173	Electrical Work	12.38
58	460	Pipe Lines, except Natural Gas	12.00
59	287	Agricultural Chemicals	11.81
60	289	Miscellaneous Chemical Products	11.79
61	263	Paperboard Mills	11.77
62	245	Wood Buildings, Mobile Homes	11.76
63	890	Miscellaneous Services	11.56
64	207	Fats and Oils	11.51
65	329	Nonmetallic Mineral Products	11.23
66	311	Leather Tanning and Finishing	11.06
67	291	Petroleum Refining	10.94
68	328	Cut Stone and Stone Products	10.70
69	410	Local and Interurban Transit	10.18
70	203	Preserved Fruits and Vegetables	10.08
71	344	Structural Metal Products	10.00
72	352	Farm and Garden Machinery	9.81
73	153	Operative Builders	9.80
74	353	Construction Machinery	9.67
75	202	Dairy Products	9.42
75	313	Boot, Shoe Cut Stock, Findings	9.42
76	333	Primary Nonferrous Metals	9.31
77	229	Miscellaneous Textile Goods	9.10
78	500	Wholesale Trade--Durable Goods	9.01
79	335	Nonferrous Rolling and Drawing	8.54
80	480	Communication	8.47
81	209	Foods and Kindred Products	8.39
82	348	Ordnance and Accessories	8.24
83	271	Newspapers	8.08
84	379	Miscellaneous Transportation Equipment.	7.99
85	200	Food and Kindred Products	7.97
86	249	Miscellaneous Wood Products	7.94
87	272	Periodicals	7.58
88	262	Paper Mills, except Building Paper	7.09
89	590	Miscellaneous Retail Stores	7.01
90	323	Products of Purchased Glass	6.96
91	205	Bakery Products	6.91
92	175	Carpentering and Flooring	6.90
93	276	Manifold Business Forms	6.88
93	422	Public Warehousing	6.88
94	282	Plastics, Synthetic Materials	6.75
95	316	Luggage	6.71
96	261	Pulp Mills	6.53
97	769	Miscellaneous Repair Shops	6.24
98	540	Food Stores	5.95
99	391	Jewelry, Silverware, etc.	5.92
100	550	Auto Dealers and Service Stations	5.84
101	343	Plumbing and Heating, except Electric	5.70
102	730	Business Services	5.47
103	340	Fabricated Metal Products	5.37

Appendix E (Cont.)

<i>Rank</i>	<i>S.I.C. Code</i>	<i>Description</i>	<i>Rate per 100,000</i>
104	280	Chemicals and Allied Products	5.23
105	470	Transportation Services	5.16
106	355	Special Industry Machinery	5.13
107	201	Meat Products	5.00
108	301	Tires and Inner Tubes	4.97
109	302	Rubber and Plastic Footwear	4.91
110	393	Musical Instruments	4.67
111	260	Paper and Allied Products	4.59
112	270	Printing and Publishing	4.56
113	760	Miscellaneous Repair Services	4.51
114	277	Greeting Card Publishing	4.49
115	700	Hotels and Lodging Places	4.48
116	304	Rubber and Plastic Hose and Belting	4.34
116	347	Metal Services, n.e.c.	4.34
118	370	Transportation Equipment	4.25
119	630	Insurance Carriers	4.24
120	350	Machinery, except Electrical	4.20
121	750	Auto Repair, Services, Garages	4.13
122	374	Railroad Equipment	4.04
123	259	Miscellaneous Furniture, Fixtures	4.03
124	253	Public Building Furniture	4.02
125	226	Textile Finishing, except Wool	3.95
126	322	Glasswear, Pressed or Blown	3.93
127	265	Paperboard Containers	3.88
128	356	General Industry Machinery	3.82
129	349	Miscellaneous Metal Products	3.65
130	640	Insurance Agents, Brokers, Services	3.64
131	286	Industrial Organic Chemicals	3.55
132	300	Rubber and Miscellaneous Plastic Prod.	3.53
133	570	Furniture and Home Furnishings	3.40
134	650	Real Estate	3.38
135	359	Miscellaneous Machinery, except Electrical	3.36
136	227	Floor Covering Mills	3.34
137	251	Household Furniture	3.32
138	285	Paints and Allied Products	3.10
139	284	Soap, Cleaners and Toilet Goods	3.08
140	208	Beverages	3.07
141	307	Miscellaneous Plastics Products	3.06
142	580	Eating and Drinking Places	3.05
143	820	Educational Services	2.88
144	250	Furniture and Fixtures	2.85
145	275	Commercial Printing	2.74
146	720	Personal Services	2.67
147	382	Measuring and Controlling Devices	2.66
148	306	Fabricated Rubber Products	2.65
149	390	Miscellaneous Manufacturing Industries	2.59
150	211	Cigarettes	2.58
151	281	Industrial and Inorganic Chemicals	2.53
152	399	Miscellaneous Manufactures	2.49
153	220	Textile Mill Products	2.45
154	225	Knitting Mills	2.42
155	346	Metal Forgings and Stampings	2.41
155	371	Motor Vehicles and Equipment	2.41
156	342	Cutlery, Hand Tools, Hardware	2.32
157	384	Medical Instruments, Supplies	2.28
158	780	Motion Pictures	2.22

Appendix E (Cont.)

<i>Rank</i>	<i>S.I.C. Code</i>	<i>Description</i>	<i>Rate per 100,000</i>
159	357	Office and Computing Machines	2.06
159	362	Electrical Industrial Apparatus	2.06
159	610	Credit Agencies, except Banks	2.06
160	354	Metal Working Machinery	2.04
161	396	Costume Jewelry and Notions	2.03
162	372	Aircraft and Parts	1.92
163	364	Electric Lighting and Wiring Equipment.	1.89
164	239	Miscellaneous Fabricated Textiles	1.88
165	310	Leather and Leather Products	1.84
166	345	Bolts, Screw Machine Products	1.81
167	236	Children's Outerwear	1.76
168	380	Instruments and Related Products	1.70
169	361	Electric Distributing Equipment.	1.69
170	210	Tobacco Manufactures	1.66
171	394	Toys and Sporting Goods	1.61
172	228	Yarn and Thread Mills	1.53
173	231	Men's and Boys' Suits and Coats	1.45
174	221	Weaving Mills, Cotton	1.30
175	341	Metal Shipping Containers	1.24
176	367	Electronic Components, Accessories	1.19
177	360	Electric and Electronic Equipment.	1.18
177	363	Household Appliances	1.18
178	830	Social Services	1.14
179	358	Refrigeration, Service Machinery	1.12
180	336	Nonferrous Foundries	1.08
181	376	Guided Missiles, etc. and Parts	0.93
182	366	Communication Equipment	0.78
182	386	Photographic Equipment and Supplies	0.78
183	600	Banking	0.74
184	790	Amusement and Recreation Services.	0.69
185	800	Health Services	0.64
186	230	Apparel and Other Textile Prod	0.63
187	369	Electrical Equipment and Supplies	0.59
188	530	General Merchandise Stores	0.56
189	264	Miscellaneous Converted Paper Prod	0.48
190	233	Women's and Misses' Outerwear	0.28
191	560	Apparel and Accessory Stores	0.18

Footnote to Appendix E: The BLS did not supply death rates for the following industries.

090 Fishing, Hunting, and Trapping; 110 Anthracite Mining; 212 Cigars; 213 Chewing and Smoking Tobacco; 214 Tobacco Stemming, Redrying; 222 Weaving Mills, Synthetics; 223 Weaving Mills, Wool; 224 Narrow Fabric Mills; 232 Men's and Boys' Furnishings; 234 Women's and Children's Underwear; 235 Hats, Caps, and Millinery-; 238 Miscellaneous Apparel and Accessories; 252 Office Furniture; 254 Partitions and Fixtures; 266 Building Paper and Board Mills; 273 Books; 274 Miscellaneous Publishing-; 278 Blankbooks and Book Binding; 279 Printing Trade Services; 299 Miscellaneous Petroleum and Coal Prod.; 303 Reclaimed Rubber; 314 Footwear, except Rubber; 315 Leather Gloves and Mittens; 317 Handbags and Leather Goods; 319 Leather Goods, n.e.c.; 321 Flat Glass; 326 Pottery and Related Products; 351 Engines and Turbines; 365 Radio and TV Receiving Equipment; 381 Scientific Instruments; 383 Optical Instruments and Lenses; 385 Ophthalmic Goods; 387 Watches, Clocks and Watchcases; 395 Office and Art Supplies; 620 Security, Commodity Services; 840 Museums, Botanical Gardens, Zoos.

*Appendix F**Occupations with Zero Deaths*

003 Computer programmers; 006 Aeronautical engineers; 014 Mechanical engineers; 015 Materials engineers; 021 Petroleum engineers; 022 Sales engineers; 024 Farm management advisors; 026 Home management advisors; 032 Librarians; 033 Archivists and curators; 034 Actuaries; 035 Mathematicians; 036 Statisticians; 043 Space scientists; 052 Marine scientists; 054 Life and physical scientists; 061 Chiropractors; 062 Dentists; 063 Optometrists; 071 Podiatrists; 073 Health practitioners, nec; 074 Dieticians; 076 Therapists; 080 Clinical lab technicians; 081 Dental hygienists; 082 Health record technologists and technicians; 083 Radiologic technicians; 085 Health technicians, nec; 090 Religious workers, nec; 091 Economists; 092 Political scientists; 093 Psychologists; 094 Sociologists; 095 Urban and regional planners; 096 Social scientists, nec; 102 Agriculture teachers; 103 Ecological science teachers; 104 Biology teachers; 105 Chemistry teachers; 110 Physics teachers; 111 Engineering teachers; 112 Mathematics teachers; 113 Health specialties teachers; 114 Psychology teachers; 116 Economics teachers; 120 History teachers; 121 Sociology teachers; 122 Social science teachers, nec; 123 Teachers of the arts; 125 Education teachers; 126 English teachers; 130 Foreign language teachers; 131 Home economics teachers; 132 Law teachers; 133 Theology teachers; 134 Trade and technical teachers; 135 Misc. college teachers; 143 Preschool teachers; 151 Chemical technicians; 155 Mech. engineering technicians; 156 Mathematical technicians; 64 Air traffic controllers; 165 Embalmers; 170 Flight engineers; 172 Tool programmers; 175 Actors; 181 Authors; 182 Dancers; 185 Musicians and composers; 191 Photographers; 193 Radio and TV announcers; 221 Ship officers and pilots; 224 Mail superintendents; 226 Railroad conductors; 261 Auctioneers; 262 Demonstrators; 264 Hucksters and peddlers; 285 Sales wks, svcs & constrcn; 303 Billing clerks; 311 Clerks, social welfare; 313 Collectors, bill and account; 330 Library attendants; 331 Mail carriers, post office; 341 Bookkeeping machine operator; 342 Calculating machine operator; 343 Computer operators; 344 Duplicating machine operator; 345 Key punch operators; 350 Tabulating machine operators; 360 Payroll clerks; 361 Postal clerks; 362 Proofreaders; 363 Real estate appraisers; 370 Secretaries, legal; 376 Stenographers; 382 Teacher aides, exc. monitors; 384 Telegraph operators; 385 Telephone operators; 391 Typists; 403 Blacksmiths; 405 Bookbinders; 411 Apprentice masons; 423 Printing trades apprentices; 425 Decorators, window dressers; 426 Dental laboratory technician; 434 Electrotypewriter or stereotypewriter; 444 Furriers; 446 Heat treaters; 450 Inspectors; log and lumber; 454 Job and die setters; metal; 455 Locomotive engineers; 456 Locomotive firemen; 462 Machinist apprentices; 474 Auto mechanic apprentices; 475 Data processing mach. repair; 486 R.R. and car shop mechanics; 501 Millers; 504 Molder apprentices; 505 Motion picture projectionist; 506 Opticians and lens grinders; 512 Paperhangers; 514 Model makers, exc. paper; 515 Photo- or litho- engraving; 516 Piano tuning and repair; 521 Plasterer apprentices; 525 Power station operators; 531 Pressmen apprentices; 533 Metal rollers and finishers; 540 Shipfitters; 542 Shoe repairmen; 543 Sign painters and letterers; 562 Apprentice tool & die makers; 580 Former Armed Forces members; 604 Bottling & canning operators; 613 Dressmakers, except factory; 620 Dyers; 625 Non-farm produce graders; 626 Heaters, metal; 630 Laundry & cleaning operators; 636 Milliners; 653 Precision machine operators; 661 Sailors and deckhands; 665 Solderers; 670 Carders, lappers, combers; 672 Spinners and winders; 673 Weavers; 701 Boatmen and canalmen; 712 Railroad brakemen; 713 Railroad switchmen; 752 Fishermen and oystermen; 824 Self-employed farm workers; 923 Health trainees; 924 Lay midwives; 940 Board & lodging housekeepers; 941 Bootblacks; 944 Hairdressing & cosmetology; 945 Personal service apprentices; 952 School monitors; 953 Ushers; 980 Child care, private home; 981 Cooks, private household; 983 Laundresses, private home;

Appendix G

Ranking of Occupations with Five or More Deaths

<i>New Rank</i>	<i>Code</i>	<i>Occupation Description</i>	<i>Table 4.1 Rank</i>	<i>Rate per 100,000</i>	<i>Number of Deaths</i>
1	546	Stone cutters and carvers	1	297.22	11
2	761	Lumbermen, raftsmen, etc.	3	94.94	61
3	710	Motormen; logging, mine, etc.	4	94.25	7
4	163	Airplane pilots	5	89.63	47
5	603	Blasters and powdermen	6	84.88	5
6	780	Miscellaneous laborers	7	76.16	120
7	601	Asbestos workers	10	61.20	21
8	605	Surveying assistants	11	55.95	5
9	614	Drillers, earth	12	54.53	20
10	961	Firemen and fire protection	13	51.38	77
11	550	Structural metal craftsmen	14	49.84	27
12	433	Electric power linemen	15	44.35	34
13	754	Garbage collectors	16	40.42	19
14	640	Miners, nec	17	39.70	59
15	173	Technicians, nec	18	39.53	7
16	495	Not specified mechanics	19	39.17	26
17	715	Truck drivers	21	38.76	489
18	714	Taxi drivers and chauffeurs	22	37.23	40
19	404	Boilermakers	23	37.10	9
20	751	Construction laborers	25	32.89	173
21	821	Farm foremen	27	32.49	7
22	642	Greasers, except auto	29	30.74	8
23	785	Not specified laborers	31	28.47	61
24	412	Bulldozer operators	32	28.39	20
25	965	Sheriffs and bailiffs	33	27.94	13
26	503	Molders, metal	34	26.07	9
27	666	Stationary firemen	37	23.25	11
28	436	Excavating machine operators	40	21.58	62
29	492	Miscellaneous mechanics	42	20.35	34
30	051	Geologists	43	19.30	6
31	802	Farm managers	44	19.29	5
32	695	Not specified operatives	45	18.34	22
33	534	Roofers and slaters	46	18.21	17
34	964	Policemen and detectives	47	18.09	61
35	424	Crane and derrick operators	48	17.68	17
36	502	Millwrights	50	17.40	12
37	750	Carpenters' helpers	51	17.22	7
38	705	Deliverymen and routemen	52	16.63	64
39	571	Craft workers, nec	53	15.74	7
40	931	Airline stewardesses	54	15.70	5
41	535	Sheetmetal workers	55	15.41	16
42	662	Sawyers	56	15.00	12
43	402	Bakers	59	13.70	13
44	694	Miscellaneous operatives	60	13.44	69
45	522	Plumbers and pipe fitters	61	13.08	40
46	623	Gas station attendants	62	13.05	30
47	622	Furnace & smelter operators	65	12.57	5
48	441	Foremen	68	11.72	137
49	822	Farm laborers, wage workers	70	11.53	73
50	510	Painters, construction	72	11.02	35
51	962	Guards and watchmen	73	10.86	44
52	231	Sales managers	74	10.75	25
53	932	Recreation attendants	75	10.67	12

Appendix G (Cont.)

<i>New Rank Code</i>	<i>Occupation Description</i>	<i>Table 4.1 Rank</i>	<i>Rate per 100,000</i>	<i>Number of Deaths</i>
54	452 Inspectors	77	10.59	10
55	770 Warehousemen	78	10.48	19
56	333 Messengers and office boys	79	10.40	7
57	430 Electricians	82	9.90	43
58	410 Brickmasons and stonemasons	83	9.80	11
59	545 Stationary engineers	84	9.56	12
60	641 Mixing operatives	87	9.20	5
61	753 Freight & material handlers	90	8.91	44
62	612 Cutting operatives, nec	91	8.86	15
63	554 Telephone linemen	92	8.82	5
64	651 Grinding machine operative	94	8.14	7
65	903 Janitors and sextons	95	8.14	75
66	023 Engineers, nec	97	8.03	12
67	633 Meat cutters, manufacturing	99	7.93	5
68	933 Personal svc attendants, nec	100	7.88	5
69	485 Radio and TV mechanics	101	7.61	6
70	621 Filers, polishers, sanders	102	7.52	6
71	703 Bus drivers	103	7.52	18
72	652 Milling machine operatives	105	7.09	5
73	233 Sales managers, exc. retail	107	7.02	17
74	415 Carpenters	108	6.93	54
75	764 Vehicle & equipment cleaners	109	6.83	8
76	690 Misc. machine operators	111	6.55	58
77	755 Gardeners and groundskeepers	114	6.41	28
78	706 Fork lift operators	116	6.19	15
79	245 Mgrs and administrators, nec	120	5.94	254
80	045 Chemists	123	5.71	5
81	902 Cleaners and charwomen	126	5.47	34
82	473 Automobile mechanics	128	5.44	38
83	481 Heavy equipment mechanics	130	5.40	35
84	530 Pressmen and plate printers	136	5.08	6
85	692 Machine operators, nec	137	5.05	11
86	680 Welders and flame-cutters	138	5.04	23
87	240 Elem. school administrators	139	5.04	10
88	950 Housekeepers, exc. pvt home	140	5.03	5
89	230 Restaurant and bar managers	142	4.90	23
90	470 Air conditioning mechanics	144	4.86	7
91	326 Insurance adjusters	145	4.85	6
92	216 Building mgrs and supers	149	4.58	5
93	222 Public administration, nec	150	4.44	13
94	162 Engineering technicians, nec	152	4.24	7
95	631 Meat cutters, exc. mfg	157	3.93	5
96	910 Bartenders	159	3.80	8
97	013 Industrial engineers	166	3.37	5
98	145 Teachers, exc. college, nec	169	3.24	5
99	913 Dishwashers	173	2.98	5
100	552 Telephone installers	177	2.90	6
101	381 Stock clerk or storekeeper	178	2.87	10
102	031 Lawyers	179	2.75	10
103	762 Stock handlers	181	2.66	17
104	265 Insurance agents	182	2.58	10
105	281 Sales reps, manufacturing	183	2.57	7
106	202 Bank officers	186	2.44	11
107	610 Manufacturing inspectors	194	2.18	11
108	461 Machinists	195	2.17	8
109	643 Packers, exc. meat & produce	198	1.99	8

Appendix G (Cont.)

<i>New Rank</i>	<i>Code</i>	<i>Occupation Description</i>	<i>Table 4.1 Rank</i>	<i>Rate per 100,000</i>	<i>Number of Deaths</i>
110	100	Social workers	199	1.97	5
111	395	Unspecified clerical workers	202	1.94	6
112	602	Assemblers	208	1.65	13
113	925	Nursing aides and orderlies	211	1.49	11
114	374	Shipping and receiving clerk	212	1.48	5
115	912	Cooks, exc. private home	215	1.45	13
116	282	Wholesale sales reps.	221	1.25	8
117	310	Cashiers	226	1.12	12
118	915	Waiters	231	1.04	10
119	801	Farmers	252	0.52	5
120	305	Bookkeepers	254	0.46	6
121	283	Sales clerks, retail trade	258	0.37	6
122	372	Secretaries, nec	260	0.29	7
NA	995	OCCUPATION NOT REPORTED	NA	NA	234
NA	280	Sales representatives, nec	NA	NA	95
NA	575	Craftsmen, nec	NA	NA	5
					=====
					3755
					TOTAL
					DEATHS

Appendix H**Industries with Zero Deaths**

110 Anthracite Mining; 130 Oil and Gas Extraction; 160 Heavy Construction;
170 Special Trade Contractors; 200 Food and Kindred Products; 210 Tobacco Manufactures;
220 Textile Mill Products; 240 Lumber and Wood Products; 250 Furniture and Fixtures;
260 Paper and Allied Products; 270 Printing and Publishing; 280 Chemicals & Allied Products;
290 Petroleum and Coal Products; 330 Primary Metal Industries; 340 Fabricated Metal Products;
350 Machinery, Except Electrical; 360 Electric & Electronic Eqpt.; 370 Transportation Equipment;
380 Instruments & Rel. Products; 390 Misc. Mfg Industries; 400 Railroad Transportation;
600 Banking; 670 Holding, Investment Offices; 672 Invest.Offcs, Misc.Investing;
720 Personal Services; 750 Auto Repair, Services, Garages; 763 Watch & Misc. Repair Shops;
780 Motion Pictures; 911 Executive Offices; 912 Legislative Bodies;
913 Exec. & Legislative Offices; 919 General Government, nec; 920 Justice, Public Order,Safety;
921 Courts; 922 Public Order and Safety; 930 Finance,Tax,Monetary Policy;
931 Finance, Tax, Monetary Policy; 941 Admin. of Educational Pgms;
943 Admin. of Public Health Pgms; 944 Admin. Social, Manpower Pgms;
951 Environmental Quality; 953 Housing, Urban Development; 962 Regulation, Admin. of Trans.;
964 Regulation of Agric. Mktg; 965 Regulation Commercial Sectors; 971 National Security.

Appendix I

Ranking of Industries with Five or More Deaths

New Rank	SIC Code	Industry Description	Table 5.1	
			Rank	Rate per 100,000
1	241	Logging Camps and Contractors	1	186.8158
2	328	Cut Stone and Stone Products	2	103.00429
3	412	Taxicabs	3	102.44616
4	101	Iron Ores	4	45.219638
5	142	Crushed and Broken Stone	5	37.105751
6	161	Highway, Street Construction	6	36.298349
7	147	Chemical and Fertilizer Minerals	7	35.195777
8	421	Trucking	8	32.84274
9	179	Miscellaneous Special Contractors	9	32.451323
10	103	Lead and Zinc Ores	10	30.508475
11	162	Heavy Construction, except Highway	11	30.408869
12	242	Sawmills and Planing Mills	12	28.882257
13	207	Fats and Oils	13	28.068385
14	311	Leather Tanning and Finishing	14	27.917365
15	495	Sanitary Services	15	27.277687
16	551	New and Used Car Dealers	16	25.815705
17	172	Painting, Papering, Decorating	17	25.712025
18	144	Sand and Gravel	18	25.582717
19	327	Concrete and Plaster Products	19	24.654832
20	295	Paving and Roofing Materials	20	24.449878
21	176	Roofing and Sheet Metal Work	21	24.387477
22	458	Air Transportation Services	22	23.398128
23	334	Secondary Nonferrous Metals	23	23.277467
24	332	Iron and Steel Foundries	24	23.106402
25	509	Miscellaneous Durable Goods	26	21.797536
26	493	Combination Utility Services	27	20.522575
27	177	Concrete Work	28	19.152685
28	598	Fuel and Ice Dealers	29	18.99696
29	171	Plumbing, Heating, Air Conditioning	30	17.034264
30	503	Lumber and Construction Materials	31	16.977929
31	325	Structural Clay Products	32	16.806723
32	244	Wood Containers	33	16.714422
33	422	Public Warehousing	34	16.705647
34	154	Nonresidential Construction	35	15.812312
35	262	Paper Mills, except Building Paper	36	15.654897
36	542	Meat, Freezer Provisioners	37	15.633142
37	285	Paints and Allied Products	38	15.523129
38	174	Masonry, Stonework, Plastering	39	15.495605
39	202	Dairy Products	40	15.266279
40	205	Bakery Products	41	14.51708
41	413	Intercity Highway Transport	43	13.646288
42	206	Confectionery Products	44	13.402259
43	513	Apparel, Piece Goods, Notions	46	12.572147
44	204	Grain Mill Products	47	12.550757
45	329	Nonmetallic Mineral Products	48	12.46203
46	333	Primary Nonferrous Metals	49	12.125411
47	245	Wood Buildings, Mobile Homes	51	11.114198
48	243	Millwork, Plywood, etc.	52	11.047689
49	651	Real Estate Operators	53	10.583767
50	517	Oil and Petroleum Products	54	10.569853
51	411	Local and Suburban Transport	55	10.443258
52	173	Electrical Work	56	10.220304
53	526	Retail Garden Stores	57	10.204082

Appendix I (Cont.)

<i>New Rank</i>	<i>SIC Code</i>	<i>Industry Description</i>	<i>Table 5.1 Rank</i>	<i>Rate per 100,000</i>	<i>Number of Deaths</i>
54	514	Groceries and Related Products	58	10.050251	69
55	251	Household Furniture	59	9.9920064	30
56	554	Gasoline Service Stations	60	9.9194994	52
57	281	Industrial and Inorganic Chemicals	61	9.7892058	15
58	289	Miscellaneous Chemical Products	62	9.7434232	9
59	415	School Buses	63	9.7122739	8
60	518	Beer, Wine, Distilled Liquors	64	9.6658382	14
61	751	Auto Rentals, without Drivers	65	9.5762509	12
62	519	Miscellaneous Non durable Goods	66	9.4510906	38
63	271	Newspapers	67	9.4341793	41
64	546	Retail Bakeries	68	9.3223378	13
65	471	Freight Forwarding	71	9.1274188	5
66	515	Farm-Product Raw Materials	72	9.0775784	13
67	208	Beverages	73	8.8640695	20
68	249	Miscellaneous Wood Products	74	8.8562753	7
69	252	Office Furniture	75	8.8354833	5
70	175	Carpentering and Flooring	76	8.8345226	13
71	226	Textile Finishing, except Wool	77	8.7899209	6
72	152	Residential Building Construction	78	8.721174	52
73	653	Real Estate Agents, Managers	79	8.4756326	34
74	399	Miscellaneous Manufactures	80	8.2800151	11
75	229	Miscellaneous Textile Goods	81	8.1819669	5
76	201	Meat Products	82	8.0692284	29
77	794	Commercial Sports	83	7.976602	6
78	282	Plastics, Synthetic Materials	84	7.9605158	15
79	336	Nonferrous Foundries	85	7.9176564	7
80	762	Electrical Repair Shops	86	7.8046605	7
81	153	Operative Builders	87	7.7006006	5
82	347	Metal Services, n.e.c.	89	7.6038399	8
83	753	Automotive Repair Shops	90	7.4517563	29
84	138	Oil and Gas Field Services	92	7.3893901	24
85	451	Certified Air Transportation	93	7.2651319	32
86	291	Petroleum Refining	94	7.2074433	11
87	352	Farm and Garden Machinery	95	7.2014979	10
88	331	Basic Steel Products	98	6.9835766	29
89	863	Labor Organizations	99	6.9725282	10
90	353	Construction Machinery	100	6.8587106	22
91	504	Sporting, Toy, and Hobby Goods	101	6.8203519	5
92	286	Industrial Organic Chemicals	102	6.6909976	11
93	344	Structural Metal Products	103	6.5568223	31
94	821	Elementary, Secondary Schools	106	6.1915469	19
95	592	Liquor Stores	108	6.0569352	8
96	209	Foods and Kindred Products	109	6.048509	10
97	483	Radio and TV Broadcasting	111	5.9954803	13
98	572	Household Appliance Stores	113	5.9801459	5
99	553	Auto and Home Supply Stores	114	5.7893404	16
100	721	Laundry, Cleaning, etc. Services	115	5.78369	21
101	599	Retail Stores, n.e.c.	117	5.5946012	16
102	505	Metals and Minerals, except Oil	118	5.5424692	8
103	511	Paper and Paper Products	119	5.5353958	9
104	239	Miscellaneous Fabricated Textiles	120	5.5215063	10
105	734	Services to Buildings	122	5.4836199	31
106	355	Special Industry Machinery	124	5.4436581	10
107	491	Electric Services	125	5.255614	22

Appendix I (Cont.)

<i>New Rank</i>	<i>SIC Code</i>	<i>Industry Description</i>	<i>Table 5.1 Rank</i>	<i>Rate per 100,000</i>	<i>Number of Deaths</i>
108	525	Hardware Stores	126	5.2514113	8
109	703	Camps and Trailing Parks	127	5.1981806	8
110	566	Shoe Stores	128	5.1297835	10
111	508	Machinery, Equipment, and Supplies	130	5.0904852	69
112	346	Metal Forgings and Stampings	132	5.0882618	13
113	351	Engines and Turbines	133	5.0757127	6
114	203	Preserved Fruits and Vegetables	135	5.0289163	12
115	265	Paperboard Containers	136	4.9830576	10
116	506	Electrical Goods	137	4.9708527	22
117	264	Miscellaneous Converted Paper Prod.	138	4.9135659	11
118	501	Motor Vehicles and Automotive Equip.	140	4.8603854	20
119	521	Lumber, Other Building Materials	141	4.7786871	16
120	307	Miscellaneous Plastics Products	142	4.7767848	24
121	739	Miscellaneous Business Services	143	4.7695147	77
122	233	Women's and Misses' Outerwear	144	4.7679992	19
123	502	Furniture and Home Furnishings	145	4.5910169	6
124	356	General Industry Machinery	146	4.4719642	13
125	507	Hardware, Plumbing, Heating Equip.	148	4.444624	11
126	571	Home Furnishings Stores	149	4.4216714	17
127	573	Radio, TV, and Music Stores	150	4.3572985	8
128	284	Soap, Cleaners and Toilet Goods	151	4.1969782	6
129	752	Automobile Parking	152	4.0584416	10
130	358	Refrigeration,, Service Machinery	153	4.0317936	7
131	561	Men's Clothing and Furnishings	154	3.9939292	5
132	541	Grocery Stores	155	3.9401632	88
133	516	Chemicals and Allied Products	156	3.9105271	5
134	386	Photographic Equipment and Supplies	157	3.855942	5
135	342	Cutlery, Hand Tools, Hardware	158	3.8170367	6
136	225	Knitting Mills	159	3.7534015	8
138	731	Advertising	162	3.6027381	6
139	283	Drugs	164	3.5089478	7
140	349	Miscellaneous Metal Products	168	3.3408502	8
141	701	Hotels, Motels, Tourist Courts	175	3.1019569	35
142	594	Miscellaneous Shopping Goods Stores	176	3.0677199	20
143	335	Nonferrous Rolling and Drawing	179	3.0257186	6
144	492	Gas Production and Distribution	180	3.0051689	5
145	373	Ship and Boat Building and Repair	184	2.9359953	6
146	371	Motor Vehicles and Equipment	186	2.9089621	23
147	362	Electrical Industry Apparatus	191	2.7349804	6
148	621	Security Brokers and Dealers	197	2.6227215	6
149	864	Civic and Social Associations	198	2.6205451	9
150	839	Social Services, n.e.c.	201	2.5682733	6
151	832	Individual and Family Services	203	2.390724	6
152	633	Fire, Marine, and Casualty Insurance	207	2.2956362	11
153	596	Nonstore Retailers	208	2.2542831	6
154	359	Misc. Machinery, except Electrical	211	2.1544759	6
155	481	Telephone Communication	214	2.1304008	21
156	131	Crude Oil and Natural Gas	218	2.0674826	5
157	275	Commercial Printing	219	2.0089734	9
158	078	Landscape, Horticultural Services	220	1.9799802	18
159	357	Office and Computing Machines	221	1.9764582	9
160	121	Bituminous Coal and Lignite	223	1.9237203	23
161	562	Women's Ready-to-Wear Stores	229	1.6474917	6
162	736	Personnel Supply Services	231	1.5585593	11

Appendix I (Cont.)

<i>New Rank</i>	<i>SIC Code</i>	<i>Industry Description</i>	<i>Table 5.1 Rank</i>	<i>Rate per 100,000</i>	<i>Number of Deaths</i>
163	602	Commercial, Stock Savings Banks	236	1.4226389	21
164	822	Colleges and Universities	238	1.3235391	10
165	805	Nursing, Care Facilities	243	1.1866944	13
166	531	Department Stores	244	1.164169	22
167	591	Drug and Proprietary Stores	245	1.1587933	6
168	631	Life Insurance	247	1.1190063	6
169	806	Hospitals	248	1.0801544	31
170	367	Electrical Components, Accessories	250	1.0227738	6
171	366	Communication Equipment	259	0.899038	5
172	801	Offices of Physicians	262	0.8293446	7
173	641	Insurance Agents, Brokers Services	275	0.4970508	15
174	581	Eating and Drinking Places	279	0.4019293	123
175	811	Legal Services	280	0.3665689	13
176	866	Religious Organizations	281	0.2312183	12
NA	NA	Other	NA	n.d.	282
					=====
					4524

NA = Not Available
 n.d. = no data
 n.e.c. = not elsewhere classified

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