Appendix C. Census of Fatal Occupational Injuries Fatality Rates

Fatality rates may be used to compare the risk of incurring injury among worker groups with varying employment levels. Overall, the fatality rate for all U.S. workers in 2004 was 4.1 fatalities per 100,000 workers—a slight increase from the 4.0 reported for 2003. The fatality rate varied by worker demographics, occupation, and industry. For example, Hispanic workers, who have consistently experienced a higher rate of fatal injury than have non-Hispanic workers, incurred a rate of 5.0 fatalities per 100,000 workers, compared with the rate of 4.1 fatalities per 100,000 workers among white, non-Hispanic workers.

Farming, forestry, and fishing occupations had the highest fatal work injury rate among the major occupational groups (28.1 fatalities per 100,000 workers). Similarly, among private industry groups, the agriculture, forestry, farming, and hunting industry, had the highest fatality rate, with 30.5 fatalities per 100,000 workers. The second highest fatality rate belonged to the mining industry, which includes oil and gas extraction; mining had a fatality rate of 28.3 per 100,000 workers.

Fatality rates were computed using estimates of civilian workers (aged 16 and older) from the Current Population Survey (CPS). The numerator (fatalities) and denominator (employment) of the rate should refer to the same group of workers as closely as possible. Because CPS employment data exclude workers under the age of 16, fatalities to these workers were excluded from the numerator in the calculation. Where appropriate, resident military employment figures from the U.S. Department of Defense were added to CPS figures to calculate rates. These rates were computed for 2004 as:

Fatality rate (2004) = (N_{04}/W_{04}) * 100,000,

where,

N_{year} = number of fatally injured workers, aged 16 and older

W_{year} = annual average number of employed workers aged 16 and older

There are a number of limitations to the fatality rates including the following:

- Because the CPS employment data used to calculate the rates are estimates based on a sample of households rather than a complete count, the CPS estimates and, therefore, the fatality rates are subject to sampling errors. Data users may use relative standard errors of the CPS employment estimates to approximate confidence intervals for the fatality rates.

- The CPS categorizes workers according to their primary job, which may differ from the job in which the decedent was working when fatally injured, as reported in the Census of Fatal Occupational Injuries.

- The rates are based on employment. They factor out differences in the number of fatal work injuries between worker groups due to different employment levels. They do not take into account differences in the number of hours worked. Hours-based rates, which factor out these differences, generally are considered more accurate. However, because of limitations in the availability of data for hours worked, the rates presented in this publication are employment based.

See "Explanatory Notes and Estimates of Error" in the January 2004 issue of *Employment and Earnings* for an explanation of CPS sampling, estimation, and standard error computations.