in the avoidance of injury has a direct effect on the placement and productivity of workers. When a key employee is injured his place usually is taken by a substitute whose skill is less than the injured. This has a direct impact on group activity, including their productivity and earnings, until the injured workman has recovered enough to resume his regular job. Moreover the injured workman may have his productivity and earnings impaired if he sustains a partial permanent disability.

(c) Effects on business or industrial organization and management; the stimulation of new business enterprises or expansion of existing ones; business location; and effect on competition, if any: Accidents and injuries in any business enterprise are wasteful and costly. Aside from the humanitarian aspects, usually accidents and injuries are accompanied by damage or destruction of equipment, physical plant and facilities. Therefore they have a most direct impact on business

management, competition, etc.

(d) Effects on the stability, level, volume, or other aspects of employment, wages, costs, productions, sales, prices, or other phases of economic activity: The avoidance of accidents and injuries through an effective accident-prevention program has a beneficial economic impact on any business enterprise. Good injury experience results in stable employment, increased production, reduced costs, better competitive sales prices, and improved employer-employee relationships.

(e) Any benefits (not included above) resulting from the particular

governmental program. Specify the groups or economic segments primarily affected: The Bureau of Mines accident-prevention program is designed to provide guidance and leadership to the various mineral industries which is intended to stimulate industry to "carry the ball" of safety. The Bureau through its training courses "sparkplugs" the desire for industry to institute its own accident-prevention programs and from time to time assists industry with new material and guidance as appropriate in the circumstances.

(f) Pertinent geographic differentials, such as variations in the regional, State, or metropolitan area scale of operations or economic impacts: Geography plays an insignificant part in an effective accident-prevention program except as it may affect climatic conditions. The philosophy behind the saving of human life and avoidance of injury to the workman is universal. The economic impact on his family and himself to say nothing of the avoidance of pain and suf-

fering is not influenced by geographical differences.

(g) The measurable contribution of the program to either the magnitude or the rate of growth of the gross national product, if such a contribution can be identified: It is difficult if not impossible to translate the cost of accidents and injuries into dollars and cents. A long-used rule of thumb is that the indirect costs are four to five times the direct costs of medical, hospital, and compensation insurance expenses. All that can be said is that the economic impact of personal injury on the worker, his family, and the industry he works in is, indeed, sizable. A poor industrywide accident record most certainly will have a depressing effect on the rate of growth of the gross national product.