

This report presents an overview of technologies critical to the economic health of the mining and quarrying industries in the United States. The findings were derived from confidential discussions with leading representatives of 58 mining firms, equipment manufacturers, research institutions, and other organizations who were selected for their prominent positions in the industry and their ability to think broadly and creatively about current technology trends.

The study was commissioned by the National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention. Additional funding was provided by the U.S. Department of Energy (DOE) Office of Industrial Technologies, with organizational support from the White House Office of Science and Technology Policy (OSTP).

This report is intended to

- Aid federal officials in understanding emerging critical-technology trends in the mining industry.
- Help decisionmakers develop priorities for the national mining health and safety research agenda.
- Assist decisionmakers in refining federal funding priorities for mining technology research and development.

The report will also help mining industry executives, researchers, and stakeholders obtain a broad view and understanding of technology trends pertinent to their operations. While mining and quarrying operations share many technologies and processes, the industry is highly fragmented and competitive, and communication among firms is limited. Thus, industry decisionmakers can benefit from their colleagues' experiences and forward-looking perspectives presented herein.

This research builds on two previous RAND technology studies:

- Steven W. Popper, et al., *New Forces at Work: Industry Views Critical Technologies*, MR-1008-OSTP, RAND, 1998.
- Susan Resetar, *Technology Forces at Work: Profiles of Environmental Research and Development at DuPont, Intel, Monsanto, and Xerox*, MR-1068-OSTP, RAND, 1999.

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