

Securities and Exchange Commission  
Washington, D.C. 20549

FORM 10-K  
ANNUAL REPORT

Pursuant to Section 13 or 15 (d) of the  
Securities Exchange Act of 1934  
For the fiscal year ended  
December 31, 2001

Commission file number 0-2504

MINE SAFETY APPLIANCES COMPANY  
A Pennsylvania Corporation  
IRS Employer Identification No. 25-0668780  
121 Gamma Drive  
RIDC Industrial Park  
O'Hara Township  
Pittsburgh, Pennsylvania 15238  
Telephone 412/967-3000

Securities registered pursuant to Section 12(b) of the Act:

| Title of each class        | Name of each exchange on which registered |
|----------------------------|---|
| Common Stock, no par value | American Stock Exchange                   |

Securities registered pursuant to Section 12(g) of the Act:

Preferred Stock Purchase Rights

(COVER PAGE)

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2001

Commission File No. 0-2504

MINE SAFETY APPLIANCES COMPANY

(Exact name of registrant as specified in its charter)

Pennsylvania

25-0668780

(State or other jurisdiction of  
incorporation or organization)

(IRS Employer Identification No.)

121 Gamma Drive  
RIDC Industrial Park  
O'Hara Township  
Pittsburgh, Pennsylvania

15238

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: 412/967-3000

Securities registered pursuant to Section 12(b) of the Act:

| Title of each class        | Name of each exchange on which registered |
|----------------------------|---|
| Common Stock, no par value | American Stock Exchange                   |

Securities registered pursuant to Section 12(g) of the Act:

Preferred Stock Purchase Rights

(Title of Class)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months and (2) has been subject to such filing requirements for the past 90 days.

Yes

No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in the definitive proxy statement incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

As of February 22, 2002, there were outstanding 12,102,227 shares of common stock, no par value, not including 1,415,373 shares held by the Mine Safety Appliances Company Stock Compensation Trust. Total market value of outstanding shares as of February 22, 2002 was \$462,305,000. The aggregate market value of voting stock held by non-affiliates as of February 22, 2002 was \$311,785,000.

(COVER PAGE)

DOCUMENTS INCORPORATED BY REFERENCE

The following documents have been incorporated by reference:

| DOCUMENT  | FORM 10-K<br>PART NUMBER |
|---|--------------------------|
| - - - - -   | - - - - -                |
| (1) Annual Report to Shareholders<br>for the year ended<br>December 31, 2001  | I, II, IV                |
| (2) Proxy Statement filed<br>pursuant to Regulation 14A<br>in connection with the registrant's<br>Annual Meeting of Shareholders to<br>be held on May 7, 2002 | III                      |

PART I

Item 1. Business

Operating Segments:

The company is organized into three geographic operating segments - North America, Europe and Other International. Further information with respect to the registrant's operating segments is reported at Note 7 of Notes to Consolidated Financial Statements contained in the registrant's Annual Report to Shareholders for the year ended December 31, 2001, incorporated herein by reference.

Products and Markets:

The primary business of the registrant and its affiliated companies is the manufacture and sale of products designed to protect the safety and health of people throughout the world.

Principal products include respiratory protective equipment that is air-purifying, air-supplied and self-contained in design; instruments that monitor and analyze workplace environments and control industrial processes; thermal imaging cameras that enable firefighters and rescue workers to see through smoke and darkness; and personal protective products including head, eye and face, hearing protectors, and fall protection equipment.

Many of these products have wide application for workers in industries that include manufacturing, municipal and volunteer fire departments, public utilities, mining, chemicals, petroleum, construction, transportation, the military, and hazardous materials clean-up. Consumer products target the do-it-yourself market and are available through select home center retail outlets under the MSA Safety Works(TM) brand.

Other products manufactured and sold, which do not fall within the category of safety and health equipment, include boron-based and other specialty chemicals. Additional information concerning the registrant's products is reported at Note 7 of Notes to Consolidated Financial Statements contained in the registrant's Annual Report to Shareholders for the year ended December 31, 2001, incorporated herein by reference.

The registrant and its affiliated companies compete with many large and small enterprises. For most of the registrant's products and in most markets, principal methods of competition are product features, quality and price. In the opinion of management, the registrant is a leader in the manufacture of safety and health

equipment.

Orders, except under contracts with U.S. government agencies, are generally filled promptly after receipt and the production period for special items is usually less than one year. The year-end backlog of orders under contracts with U.S. government agencies was \$27,400,000 in 2001, \$14,582,000 in 2000 and \$10,225,000 in 1999.

Sales of products to U.S. government agencies increased in 2001; in addition, incoming orders were higher than shipments in both 2001 and 2000. The company's business is not dependent on a single customer or group of related customers, the loss of which would have a material adverse effect on the registrant's results.

Research:

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The registrant and its affiliated companies engage in applied research with a view to developing new products and new applications for existing products. Most of the products are designed and manufactured to meet currently applicable performance and test standards published by groups such as ANSI (American National Standards Institute), MSHA (Mine Safety & Health Administration), NIOSH (National Institute for Occupational Safety and Health), UL (Underwriters' Laboratories), SEI (Safety Equipment Institute), FM (Factory Mutual), CEN (European Committee for Standardization) and CSA (Canadian Standards Association). The registrant also from time to time engages in research projects for others such as the Bureau of Mines and the Department of Defense or its prime contractors. Registrant-sponsored research and development costs were \$18,195,000 in 2001, \$17,241,000 in 2000, and \$17,097,000 in 1999.

In the aggregate, patents have represented an important element in building the business of the registrant and its affiliates, but in the opinion of management no one patent or group of patents is of material significance to the business as presently conducted.

General:

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The company was founded in 1914 and is headquartered in Pittsburgh, Pennsylvania. As of December 31, 2001, the registrant and its affiliated companies had approximately 4,100 employees, of which 2,000 were employed by international affiliates. None of the U.S. employees are subject to the provisions of a collective bargaining agreement.

In the United States and in those countries in which the registrant has affiliates, its products are sold by its own salespersons, independent distributors and/or manufacturers' representatives. In countries where the registrant has no affiliate, products are sold primarily through independent distributors located in those countries.

The registrant is cognizant of environmental responsibilities and has taken affirmative action regarding this responsibility. There are no current or expected legal proceedings or expenditures with respect to environmental matters which would materially affect the operations of the registrant and its affiliates.

Generally speaking, the operations of the registrant and its affiliates are such that it is possible to maintain sufficient inventories of raw materials and component parts on the manufacturing premises.

Equipment and machinery for processing chemicals and rubber, plastic injection molding equipment, molds, metal cutting, stamping and working equipment, assembly fixtures and similar items are regularly acquired, repaired or replaced in the ordinary course of business at prevailing market prices as necessary.

Further information about the registrant's business is included in Management's Discussion and Analysis at pages 14 to 19 of the 2001 Annual Report to Shareholders, incorporated herein by reference.

Executive Officers:

| Name           | Age | All Positions and Offices Presently Held               |
|----------------|-----|--|
| J. T. Ryan III | 58  | Chairman and Chief Executive Officer                   |
| T. B. Hotopp   | 60  | President  |
| J. H. Baillie  | 55  | Vice President   |
| J. A. Bigler   | 52  | Vice President   |
| K. M. Bove     | 43  | Vice President   |
| D. H. Cuzzo    | 68  | Vice President and Secretary                           |
| B. V. DeMaria  | 54  | Vice President   |
| W. M. Lambert  | 43  | Vice President   |
| G. W. Steggles | 67  | Senior Vice President                                  |
| D. L. Zeitler  | 53  | Vice President and Treasurer (Chief Financial Officer) |

All the executive officers have been employed by the registrant since prior to January 1, 1997 and have held their present positions since prior to that date except as follows:

- (a) Mr. Baillie was employed by the registrant on January 21, 1999 and was elected Vice President. Prior to that time, he was Executive Vice President of Sylvania Lighting International.
- (b) Mr. Bigler was elected Vice President on January 9, 1998. Prior to that time, he was Director of Sales.
- (c) Mr. Bove was elected Vice President on August 22, 2000. From prior to January 1, 1997 until April 1997, he was Product Group Manager of Body Protection and Mining. From April 1997 until November 1998, he was Product Group Manager of Air Purifying Respirators for the Company. From November 1998 until November 1999, he was Division Marketing Manager. From November 1999, he was General Manager of the Instrument Division.
- (d) Mr. DeMaria was elected Vice President on January 9, 1998. Prior to that time, he was Director, Human Resources.
- (e) Mr. Lambert was elected Vice President on January 9, 1998. Prior to that time, he was General Manager of the Safety Products Division.

(f) Mr. Steggles was elected Senior Vice President on January 1, 1999. Prior to that time he was Vice President.

(g) Mr. Zeitler was elected Chief Financial Officer on November 1, 2000. From prior to January 1, 1997, he was Treasurer. From January 1998, he was Vice President.

The executive officers of the registrant serve at the pleasure of the Board of Directors and are not elected to any specified term of office.

The primary responsibilities of these officers follow:

| Individual<br>----- | Responsibilities<br>-----  |
|---------------------|--|
| Mr. Hotopp          | North America operations   |
| Mr. Baillie         | European operations  |
| Mr. Bigler          | North America sales and distribution   |
| Mr. Bove            | Research, product development, manufacturing and marketing of instrument products in North America |
| Mr. Cuzzo           | General Counsel and corporate taxes  |
| Mr. DeMaria         | Human resources and corporate communications   |
| Mr. Lambert         | Research, product development, manufacturing and marketing of safety products in North America     |
| Mr. Steggles        | International operations outside North America and Europe  |

Item 2. Properties

World Headquarters:

The registrant's executive offices are located at 121 Gamma Drive, RIDC Industrial Park, O'Hara Township, Pittsburgh, Pennsylvania 15238. This facility contains approximately 138,000 sq. ft.

Production and Research Facilities:

The registrant's principal North American manufacturing and research facilities are located in the Greater Pittsburgh area in buildings containing approximately 957,000 square feet. Other North American manufacturing and research facilities of the registrant are located in Jacksonville, North Carolina (107,000 sq. ft.), Sparks, Maryland (54,000 sq. ft.), Englewood, Colorado (41,000 sq. ft.), Clifton, New Jersey (41,000 sq. ft.), Etobicoke, Canada (6,500 sq. ft.), and Naucalpan, Mexico (5,800 sq. ft.).

Manufacturing facilities of the European operating segment of the registrant are located in France, Germany, Italy and Scotland. The most significant is located in Germany (approximately 454,000 sq. ft., excluding 104,000 sq. ft. leased to others). Research activities are also conducted in Germany. Manufacturing facilities for the Other International operating segment are located in Australia, Brazil, Chile, China, Japan, Peru and South Africa.

Virtually all of these buildings are owned by the registrant and its affiliates and are constructed of granite, brick, concrete block, steel or other fire-resistant materials. The German facility is owned subject to encumbrances collateralizing indebtedness in the aggregate amount of \$830,000 as of December 31, 2001.

Sales Offices and Warehouses:

Sales offices and distribution warehouses are owned or leased in the United States and 27 other countries in which the registrant's affiliates are located.

Item 3. Legal Proceedings

Not Applicable.

Item 4. Submission of Matters to a Vote of Security Holders

No matters were submitted to a vote of security holders during fourth quarter 2001.

PART II

- Item 5. Market for the Registrant's Common Equity and Related Stockholder Matters
- Item 6. Selected Financial Data
- Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
- Item 7a. Quantitative and Qualitative Disclosures About Market Risk
- Item 8. Financial Statements and Supplementary Data

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Incorporated by reference herein pursuant to Rule 12b - 23 are

Item 5 - "Common Stock" appearing at page 19

Item 6 - "Summary of Selected Financial Data" appearing at page 33

Item 7 and 7a - "Management's Discussion and Analysis" appearing at pages 14 to 19

Item 8 - "Financial Statements and Notes to Consolidated Financial Statements" appearing at pages 20 to 32

of the Annual Report to Shareholders for the year ended December 31, 2001. Said pages of the Annual Report are submitted with this report and pursuant to Item 601(b)(13) of Regulation S-K shall be deemed filed with the Commission only to the extent that material contained therein is expressly incorporated by reference in Items 1, 5, 6, 7, 7a, 8 and 14 (a) hereof.

Item 9. Changes in and Disagreements with Accountants on Accounting and

-----  
Financial Disclosure  
-----

Not applicable.

PART III

Item 10. Directors and Executive Officers of the Registrant

Item 11. Executive Compensation

Item 12. Security Ownership of Certain Beneficial Owners and Management

Item 13. Certain Relationships and Related Transactions

Incorporated by reference herein pursuant to Rule 12b - 23 are (1) "Election of Directors" appearing at pages 1 to 3, (2) "Other Information Concerning Directors and Officers" appearing at pages 4 to 10 (except as excluded below), and (3) "Stock Ownership" appearing at pages 13 to 16 of the Proxy Statement filed pursuant to Regulation 14A in connection with the registrant's Annual Meeting of Shareholders to be held on May 7, 2002. The information appearing in such Proxy Statement under the captions "Compensation Committee Report on Executive Compensation," "Audit Committee Report" and the other information appearing in such Proxy Statement and not specifically incorporated by reference herein is not incorporated herein.

PART IV

Item 14. Exhibits, Financial Statement Schedules, and Reports on Form 8-K

(a) 1 and 2. Financial Statements

The following information appearing on pages 20 to 32 inclusive in the Annual Report to Shareholders of the registrant for the year ended December 31, 2001, is incorporated herein by reference pursuant to Rule 12b-23.

Report of Independent Accountants

Consolidated Statement of Income - three years ended December 31, 2001

Consolidated Balance Sheet - December 31, 2001 and 2000

Consolidated Statement of Changes in Retained Earnings and Accumulated Other Comprehensive Income - three years ended December 31, 2001

Consolidated Statement of Cash Flows - three years ended December 31, 2001

Notes to Consolidated Financial Statements

Said pages of the Annual Report are submitted with this report and, pursuant to Item 601(b)(13) of Regulation S-K shall be deemed to be filed with the Commission only to the extent that material contained therein is expressly incorporated by reference in Items 1, 5, 6, 7, 8 and 14 (a)(1) and (2) hereof.

The following additional financial information for the three years ended December 31, 2001 is filed with the report and should be read in conjunction with the above financial statements:

Report of Independent Accountants on Financial Statement Schedule

Schedule II - Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable, not material or the required information is shown in the financial statements and notes to the financial statements listed above.

(a) 3. Exhibits

- (3)(i) Restated Articles of Incorporation as amended to April 27, 1989, filed as Exhibit 3(i) to Form 10-Q on August 12, 1999, are incorporated herein by reference.
- (3)(ii) By-laws of the registrant, as amended on March 13, 2001, filed as Exhibit 3(ii) to Form 10-K on March 27, 2001, is incorporated herein by reference.
- (4) Rights Agreement dated as of February 10, 1997 between the registrant and Norwest Bank Minnesota, N.A., as Rights Agent, is filed herewith.
- (10)(a) \* 1987 Management Share Incentive Plan, filed as Exhibit 10(a) to Form 10-K on March 26, 1999, is incorporated herein by reference.
- (10)(b) \* 1998 Management Share Incentive Plan, incorporated herein by reference to Annex A to the registrant's Definitive Proxy Statement filed March 24, 1998 for its 1998 Annual Meeting.
- (10)(c) \* Retirement Plan for Directors, as amended effective April 1, 2001, filed as Exhibit 10(c) to Form 10-K on March 27, 2001, is incorporated herein by reference.
- (10)(d) \* Supplemental Pension Plan as of May 5, 1998, filed as Exhibit 10(g) to Form 10-Q on August 14, 1998, is incorporated herein by reference.
- (10)(e) \* 1990 Non-Employee Directors' Stock Option Plan as amended effective April 1, 2001, filed as Exhibit 10(e) to Form 10-K on March 27, 2001, is incorporated herein by reference.
- (10)(f) \* Executive Insurance Program as Amended and Restated as of January 1, 2001, filed as Exhibit 10(g) to Form 10-K on March 27, 2001, is incorporated herein by reference.

- (10)(h) \* Annual Incentive Bonus Plan as of May 5, 1998, filed as Exhibit 10(k) to Form 10-Q on August 14, 1998, is incorporated herein by reference.
- (10)(i) \* Form of Severance Agreement as of May 20, 1998 between the registrant and John T. Ryan III, filed as Exhibit 10(m) to Form 10-Q on August 14, 1998, is incorporated herein by reference.
- (10)(j) \* Form of Severance Agreement as of May 20, 1998 between the registrant and the other executive officers filed as Exhibit 10(n) to Form 10-Q on August 14, 1998, is incorporated herein by reference.
- (10)(k) \* First Amendment to the 1998 Management Share Incentive Plan as of March 10, 1999, filed as Exhibit 10(l) to Form 10-K on March 26, 1999, is incorporated herein by reference.
- (10)(l) Trust Agreement as of June 1, 1996 between the registrant and PNC Bank, N.A. re the Mine Safety Appliances Company Stock Compensation Trust, filed as Exhibit 10(f) to Form 10-K on March 26, 1997, is incorporated herein by reference.
- (10)(m) \* MSA Supplemental Savings Plan, filed as Exhibit 10(n) to Form 10-Q on November 12, 1999, is incorporated herein by reference.
- (10)(n) \* Employment Agreement dated as of January 18, 1999 between the registrant and James H. Baillie re the registrant's operations outside Germany, filed as Exhibit (10)(n) to Form 10-K on March 24, 2000, is incorporated herein by reference.
- (10)(o) \* Employment Agreement dated as of January 18, 1999 between the registrant and James H. Baillie re the registrant's operations in Germany, filed as Exhibit (10)(o) to Form 10-K on March 24, 2000, is incorporated herein by reference.

The exhibits marked by an asterisk are management contracts or compensatory plans or arrangements.

(13) Annual Report to Shareholders for year ended December 31, 2001

(21) Affiliates of the registrant

(23) Consent of PricewaterhouseCoopers LLP, independent accountants

The registrant agrees to furnish to the Commission upon request copies of all instruments with respect to long-term debt referred to in Note 6 of the Notes to Consolidated Financial Statements filed as part of Exhibit 13 to this annual report which have not been previously filed or are not filed herewith.

(b) Reports on Form 8-K

No reports on Form 8-K were filed during the last quarter of the year ended December 31, 2001.

REPORT OF INDEPENDENT ACCOUNTANTS ON  
Financial Statement Schedule

To the Board of Directors  
of Mine Safety Appliances Company:

Our audits of the consolidated financial statements referred to in our report dated February 20, 2002 appearing in the 2001 Annual Report to Shareholders of Mine Safety Appliances Company (which report and consolidated financial statements are incorporated by reference in this Annual Report on Form 10-K) also included an audit of the Financial Statement Schedule listed in Item 14(a)(2) of this Form 10-K. In our opinion, this Financial Statement Schedule present fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

PricewaterhouseCoopers LLP  
Pittsburgh, Pennsylvania  
February 20, 2002

SCHEDULE II

MINE SAFETY APPLIANCES COMPANY AND AFFILIATES  
 VALUATION AND QUALIFYING ACCOUNTS  
 THREE YEARS ENDED DECEMBER 31, 2001  
 (IN THOUSANDS)

|                                  | 2001                      | 2000                      | 1999                      |
|----------------------------------|---------------------------|---------------------------|---------------------------|
|                                  | -----                     | -----                     | -----                     |
| Allowance for doubtful accounts: |                           |                           |                           |
| Balance at beginning of year     | \$2,363                   | \$2,322                   | \$3,004                   |
| Additions -                      |                           |                           |                           |
| Charged to costs and expenses    | 2,016                     | 750                       | 878                       |
| Deductions -                     |                           |                           |                           |
| Deductions from reserves (1)     | 1,423                     | 709                       | 928                       |
| Reversal of allowance (2)        |                           |                           | 632                       |
| Balance at end of year           | -----<br>\$2,956<br>===== | -----<br>\$2,363<br>===== | -----<br>\$2,322<br>===== |

- (1) Bad debts written off, net of recoveries.  
 (2) Reversal of allowance due to sale of accounts receivable.

SIGNATURES  
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Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MINE SAFETY APPLIANCES COMPANY

March 27, 2002  
-----

(Date)

By /S/ John T. Ryan III  
-----

John T. Ryan III  
Chairman of the Board and  
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature  
-----

Title  
-----

Date  
-----

|   |  |                |
|---|--|----------------|
| /S/ John T. Ryan III<br>-----<br>John T. Ryan III | Director; Chairman of the Board<br>and Chief Executive Officer | March 27, 2002 |
|---|--|----------------|

|   |   |                |
|---|---|----------------|
| /S/ Dennis L. Zeitler<br>-----<br>Dennis L. Zeitler | Vice President - Finance; Principal<br>Financial and Accounting Officer | March 27, 2002 |
|---|---|----------------|

|   |          |                |
|---|----------|----------------|
| /S/ Joseph L. Calihan<br>-----<br>Joseph L. Calihan | Director | March 27, 2002 |
|---|----------|----------------|

|   |          |                |
|---|----------|----------------|
| /S/ Calvin A. Campbell, Jr.<br>-----<br>Calvin A. Campbell, Jr. | Director | March 27, 2002 |
|---|----------|----------------|

|   |          |                |
|---|----------|----------------|
| /S/ James A. Cederna<br>-----<br>James A. Cederna | Director | March 27, 2002 |
|---|----------|----------------|

|   |          |                |
|---|----------|----------------|
| /S/ Thomas B. Hotopp<br>-----<br>Thomas B. Hotopp | Director | March 27, 2002 |
|---|----------|----------------|

|   |          |                |
|---|----------|----------------|
| /S/ L. Edward Shaw, Jr.<br>-----<br>L. Edward Shaw, Jr. | Director | March 27, 2002 |
|---|----------|----------------|

|   |          |                |
|---|----------|----------------|
| /S/ John C. Unkovic<br>-----<br>John C. Unkovic | Director | March 27, 2002 |
|---|----------|----------------|

|   |          |                |
|---|----------|----------------|
| /S/ Thomas H. Witmer<br>-----<br>Thomas H. Witmer | Director | March 27, 2002 |
|---|----------|----------------|

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MINE SAFETY APPLIANCES COMPANY

And

NORWEST BANK MINNESOTA, N.A.

Rights Agent

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Rights Agreement

Dated as of February 10, 1997  
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Exhibit A -- Statement With Respect to Shares

Exhibit B -- Form of Rights Certificate

Exhibit C -- Form of Summary of Rights

RIGHTS AGREEMENT  
-----

RIGHTS AGREEMENT, dated as of February 10, 1997 (the "Agreement"), between Mine Safety Appliances Company, a Pennsylvania corporation (the "Company"), and Norwest Bank Minnesota, N.A., a national banking association (the "Rights Agent").

W I T N E S S E T H  
-----

WHEREAS, on February 10, 1997 (the "Rights Dividend Declaration Date"), the Board of Directors of the Company authorized and declared a dividend distribution of one Right for each share of common stock, no par value, of the Company (the "Common Stock") outstanding at the close of business on February 21, 1997 (the "Record Date"), and has authorized the issuance of one Right (as such number may hereinafter be adjusted pursuant to the provisions of Section 11(p) hereof) for each share of Common Stock of the Company issued between the Record Date (whether originally issued or delivered from the Company's treasury) and the Distribution Date, each Right initially representing the right to purchase one one-thousandth of a share of Series A Junior Participating Preferred Stock (the "Preferred Stock") of the Company having the rights, powers and preferences set

forth in the form of Statement With Respect to Shares attached hereto as Exhibit A, upon the terms and subject to the conditions hereinafter set forth (the "Rights");

NOW, THEREFORE, in consideration of the premises and the mutual agreements herein set forth, the parties hereby agree as follows:

Section 1. Certain Definitions. For purposes of this Agreement, the following terms have the meanings indicated:

(a) "Acquiring Person" shall mean any Person who or which, together with all Affiliates and Associates of such Person, shall be the Beneficial Owner of 15% or more of the shares of Common Stock then out-standing, but shall not include (i) the Company, (ii) any Subsidiary of the Company, (iii) any employee benefit plan of the Company or of any Subsidiary of the Company, (iv) any Person or entity organized, appointed or established by the Company for or pursuant to the terms of any such plan, (v) any Person who has reported or is required to report such ownership (but less than 25%) on Schedule 13G under the Securities Exchange Act of 1934, as amended (the "Exchange Act") (or any comparable or successor report) or on Schedule 13D under the Exchange Act (or any comparable or successor report) which Schedule 13D does

not state any intention to or reserve the right to control or influence the management or policies of the Company or engage in any of the actions specified in Item 4 of such Schedule (other than the disposition of the Common Stock) and, within 10 Business Days of being requested by the Company to advise it regarding the same, certifies to the Company that such Person acquired shares of Common Stock in excess of 14.9% inadvertently or without knowledge of the terms of the Rights and who, together with all Affiliates and Associates, thereafter does not acquire additional shares of Common Stock while the Beneficial Owner of 15% or more of the shares of Common Stock then outstanding; provided, however, that if the Person requested to so certify fails to do so within 10 Business Days, then such Person shall become an Acquiring Person immediately after such 10 Business Day Period. In determining whether a Person is the Beneficial Owner of 15% or more of the shares of Common Stock then outstanding, there shall be excluded from the shares beneficially owned by such Person (but not from the shares outstanding) (i) shares which are Exempted Shares with respect to such Person and (ii) shares which are Exempted Shares with respect to an Affiliate or Associate of such Person and which would otherwise be included as beneficially

owned by such Person solely by reason of their beneficial ownership by that Affiliate or Associate.

(b) "Affiliate" and "Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Securities Exchange Act of 1934, as amended and in effect on the date of this Agreement (the "Exchange Act").

(c) A Person shall be deemed the "Beneficial Owner" of, and shall be deemed to "beneficially own," any securities:

(i) which such Person or any of such Person's Affiliates or Associates, directly or indirectly, has the right to acquire (whether such right is exercisable immediately or only after the passage of time) pursuant to any agreement, arrangement or understanding (whether or not in writing) or upon the exercise of conversion rights, exchange rights, rights, warrants or options, or otherwise; provided, however, that a Person

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shall not be deemed the "Beneficial Owner" of, or to "beneficially own," (A) securities tendered pursuant to a tender or exchange offer made by such Person or any of such Person's

Affiliates or Associates until such tendered securities are accepted for purchase or exchange, or (B) securities issuable upon exercise of Rights at any time prior to the occurrence of a Triggering Event, or (C) securities issuable upon exercise of Rights from and after the occurrence of a Triggering Event which Rights were acquired by such Person or any of such Person's Affiliates or Associates prior to the Distribution Date or pursuant to Section 3(a) or Section 22 hereof (the "Original Rights") or pursuant to Section 11(i) hereof in connection with an adjustment made with respect to any Original Rights;

(ii) which such Person or any of such Person's Affiliates or Associates, directly or indirectly, has the right to vote or dispose of or has "beneficial ownership" of (as determined pursuant to Rule 13d-3 of the General Rules and Regulations under the Exchange Act), including pursuant to any agreement, arrangement or understanding, whether or not in writing; provided, however, that a Person shall Not be deemed the "Beneficial Owner" -----  
of, or to

"beneficially own," any security under this subparagraph (ii) as a result of an agreement, arrangement or understanding to vote such security if such agreement, arrangement or understanding: (A) arises solely from a revocable public proxy or consent given in response to a public proxy or consent solicitation made pursuant to, and in accordance with, the applicable provisions of the General Rules and Regulations under the Exchange Act, and (B) is not then reportable by such Person on Schedule 13D under the Exchange Act (or any comparable or successor report); or

(iii) which are beneficially owned, directly or indirectly, by any other Person (or any Affiliate or Associate thereof) with which such Person (or any of such Person's Affiliates or Associates) has any agreement, arrangement or understanding (whether or not in writing), for the purpose of acquiring, holding, voting (except pursuant to a revocable proxy or consent as described in the proviso to subparagraph (ii) of this paragraph (c)) or disposing of any voting securities of the Company;  
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vided, however, that nothing in this paragraph (c) shall cause a Person

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engaged in business as an underwriter of securities to be the "Beneficial Owner" of, or to "beneficially own," any securities acquired through such person's participation in good faith in a firm commitment underwriting until the expiration of forty days after the date of such acquisition; and provided further, however, that any shareholder of the Company, with  
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Affiliates, Associates or other person(s) who may be deemed representatives of it serving as director(s) or officer(s) of the Company, shall not be deemed to beneficially own securities held by other Persons as a result of (i) persons affiliated or otherwise associated with such shareholder serving as director(s) or officer(s) or taking any action in connection therewith, (ii) discussing the status of its shares with the Company or other shareholders of the Company similarly situated or (iii) voting or acting in a manner similar to other shareholder(s) similarly situated, absent a specific finding by the Board of Directors of an express agreement

among such shareholders to act in concert with one another as shareholders so as to cause, in the good faith judgment of the Board of Directors, each such shareholder to be the Beneficial Owner of the shares held by the other shareholder(s).

(d) "Business Day" shall mean any day other than a Saturday, Sunday or a day on which banking institutions in the State of Minnesota are authorized or obligated by law or executive order to close.

(e) "Close of business" on any given date shall mean 5:00 P.M., Central time, on such date; provided, however, that if such date is not a

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Business Day it shall mean 5:00 P.M., Central time, on the next succeeding Business Day.

(f) "Common Stock" shall mean the common stock, without par value, of the Company, except that "Common Stock" when used with reference to any Person other than the Company shall mean the capital stock of such Person with the greatest voting power, or the equity securities or other equity interest having power to control or direct the management, of such Person.

(g) "Exempted Shares" shall mean at any time, with respect to any Person who is a natural person,

a trust (including any employee benefit plan trust of the Company or a Subsidiary, but excluding any other employee benefit plan trust, voting trust or business trust), estate tax-exempt foundation or similar entity (each, an "Eligible Person"), shares of Common Stock:

(i) which have been held continuously by the Eligible Person on and since the Rights Dividend Declaration Date and which are then held by that Eligible Person;

(ii) which were acquired by an Eligible Person pursuant to any employee benefit plan of the Company or any Subsidiary of the Company and which are then held by that Eligible Person;

(iii) which are then held by any Eligible Person to the extent such shares were acquired solely by gift, inheritance, bequest, devise or other testamentary distribution or series of those transactions, directly or indirectly, from an Eligible Person who had acquired such shares prior to the Rights Dividend Declaration Date or in a transaction described in subparagraph (ii); or

(iv) shares which were acquired pursuant to a stock split, stock dividend, reclassification or similar recapitalization with respect to shares described under this Section 1(g) that have been held continuously since their issuance by the Company by the Eligible Person that acquired them from the Company, or that were acquired, directly or indirectly, from that Eligible Person solely pursuant to a transaction or series of transactions described in subparagraph (iii) and that are then held by an Eligible Person described in subparagraph (iii).

Shares which are Exempted Shares with respect to an Eligible Person shall also be Exempted Shares with respect to any other Person (whether or not otherwise an Eligible Person) to the extent that such other Person beneficially owns such shares solely as a trustee, executor, legal representative of an estate, custodian, legal guardian or other fiduciary of that Eligible Person (an "Eligible Person Fiduciary"). Shares which are Exempted Shares with respect to an Eligible Person or an Eligible Person Fiduciary are not thereby automatically Exempted Shares with respect to other Persons (whether or not

otherwise an Eligible Person) who beneficially own such shares, as for example a Person with whom such Eligible Person or Eligible Person Fiduciary has an agreement, arrangement or understanding described in Section 1(c)(iii).

(h) "Person" shall mean any individual, firm, corporation, partnership or other entity.

(i) "Preferred Stock" shall mean shares of Series A Junior Participating Preferred Stock, par value \$10 per share, of the Company, and, to the extent that there are not a sufficient number of shares of Series A Junior Participating Preferred Stock authorized to permit the full exercise of the Rights, any other series of Second Cumulative Preferred Stock, par value \$10 per share, of the Company designated for such purpose containing terms substantially similar to the terms of the Series A Junior Participating Preferred Stock.

(j) "Section 11(a)(ii) Event" shall mean any event described in Section 11(a)(ii) hereof.

(k) "Section 13 Event" shall mean any event described in clauses (x), (y) or (z) of Section 13(a) hereof.

(l) "Stock Acquisition Date" shall mean the first date of public announcement (which, for pur-

poses of this definition, shall include, without limitation, a report filed pursuant to Section 13(d) under the Exchange Act) by the Company or an Acquiring Person that an Acquiring Person has become such.

(m) "Subsidiary" shall mean, with reference to any Person, any corporation of which an amount of voting securities sufficient to elect at least a majority of the directors of such corporation is beneficially owned, directly or indirectly, by such Person, or otherwise controlled by such Person.

(n) "Triggering Event" shall mean any Section 11(a)(ii) Event or any Section 13 Event.

Section 2. Appointment of Rights Agent. The Company hereby appoints

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the Rights Agent to act as agent for the Company and the holders of the Rights (who, in accordance with Section 3 hereof, shall prior to the Distribution Date also be the holders of the Common Stock) in accordance with the terms and conditions hereof, and the Rights Agent hereby accepts such appointment. The Company may from time to time appoint such co-Rights Agents as it may deem necessary or desirable.

Section 3. Issue of Rights Certificates.

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(a) Until the earlier of (i) the close of business on the tenth day after the Stock Acquisition Date (or, if the tenth day after the Stock Acquisition Date occurs before the Record Date, the close of business on the Record Date), or (ii) the close of business on the tenth business day (or such later date as the Board shall determine) after the date that a tender or exchange offer by any Person (other than the Company, any Subsidiary of the Company, any employee benefit plan of the Company or of any Subsidiary of the Company, or any Person or entity organized, appointed or established by the Company for or pursuant to the terms of any such plan) is first published or sent or given within the meaning of Rule 14d-2(a) of the General Rules and Regulations under the Exchange Act, if upon consummation thereof, such Person would be the Beneficial Owner of 15% or more of the shares of Common Stock then outstanding (the earlier of (i) and (ii) being herein referred to as the "Distribution Date"), (x) the Rights will be evidenced (subject to the provisions of paragraph (b) of this Section 3) by the certificates for the Common Stock registered in the names of the holders of the Common Stock (which certificates for Common Stock shall be deemed also to be certificates for Rights) and not by

separate certificates, and (y) the Rights will be transferable only in connection with the transfer of the underlying shares of Common Stock (including a transfer to the Company). As soon as practicable after the Distribution Date, the Rights Agent will send by first-class, insured, postage prepaid mail, to each record holder of the Common Stock as of the close of business on the Distribution Date, at the address of such holder shown on the records of the Company, one or more right certificates, in substantially the form of Exhibit B hereto (the "Rights Certificates"), evidencing one Right for each share of Common Stock so held, subject to adjustment as provided herein. In the event that an adjustment in the number of Rights per share of Common Stock has been made pursuant to Section 11(p) hereof, at the time of distribution of the Rights Certificates, the Company shall make the necessary and appropriate rounding adjustments (in accordance with Section 14(a) hereof) so that Rights Certificates representing only whole numbers of Rights are distributed and cash is paid in lieu of any fractional Rights. As of and after the Distribution Date, the Rights will be evidenced solely by such Rights Certificates.

(b) As promptly as practicable following the Record Date, the Company will send a copy of a Summary of Rights, in substantially the form attached hereto as Exhibit C (the "Summary of Rights"), by firstclass, postage prepaid mail, to each record holder of the Common Stock as of the close of business on the Record Date, at the address of such holder shown on the records of the Company. With respect to certificates for the Common Stock outstanding as of the Record Date, until the Distribution Date, the Rights will be evidenced by such certificates for the Common Stock and the registered holders of the Common Stock shall also be the registered holders of the associated Rights. Until the earlier of the Distribution Date or the Expiration Date (as such term is defined in Section 7 hereof), the transfer of any certificates representing shares of Common Stock in respect of which Rights have been issued shall also constitute the transfer of the Rights associated with such shares of Common Stock.

(c) Rights shall be issued in respect of all shares of Common Stock which are issued (whether originally issued or from the Company's treasury) after the Record Date but prior to the earlier of the Distribution Date or the Expiration Date. Certificates

representing such shares of Common Stock shall also be deemed to be certificates for Rights, and shall bear the following legend:

This certificate also evidences and entitles the holder hereof to certain Rights as set forth in the Rights Agreement between Mine Safety Appliances Company (the "Company") and Norwest Bank Minnesota, N.A. (the "Rights Agent") dated as of February 10, 1997 (the "Rights Agreement"), the terms of which are hereby incorporated herein by reference and a copy of which is on file at the principal offices of Mine Safety Appliances Company. Under certain circumstances, as set forth in the Rights Agreement, such Rights will be evidenced by separate certificates and will no longer be evidenced by this certificate. Mine Safety Appliances Company will mail to the holder of this certificate a copy of the Rights Agreement, as in effect on the date of mailing, without charge promptly after receipt of a written request therefor. Under certain circumstances set forth in the Rights Agreement, Rights issued to, or held by, any Person who is, was or becomes an Acquiring Person or any Affiliate or Associate thereof (as such terms are defined in the Rights Agreement), whether currently held by or on behalf of such Person or by any subsequent holder, may become null and void.

With respect to such certificates containing the foregoing legend, until the earlier of (i) the Distribution Date or (ii) the Expiration Date, the Rights associated with the Common Stock represented by such certificates shall be evidenced by such certificates alone and registered holders of Common Stock shall also be the registered holders of the associated Rights, and

the transfer of any of such certificates shall also constitute the transfer of the Rights associated with the Common Stock represented by such certificates.

Section 4. Form of Rights Certificates.  
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(a) The Rights Certificates (and the forms of election to purchase and of assignment to be printed on the reverse thereof) shall each be substantially in the form set forth in Exhibit B hereto and may have such marks of identification or designation and such legends, summaries or endorsements printed thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Agreement, or as may be required to comply with any applicable law or with any rule or regulation made pursuant thereto or with any rule or regulation of any stock exchange on which the Rights may from time to time be listed, or to conform to usage. Subject to the provisions of Section 11 and Section 22 hereof, the Rights Certificates, whenever distributed, shall be dated as of the Record Date and on their face shall entitle the holders thereof to purchase such number of one onethousandths of a share of Preferred Stock as shall be set forth therein at the price set forth therein (such exercise price per one onethousandth of a share, the "Purchase Price"), but the amount and type of

securities purchasable upon the exercise of each Right and the Purchase Price thereof shall be subject to adjustment as provided herein.

(b) Any Rights Certificate issued pursuant to Section 3(a) or Section 22 hereof that represents Rights beneficially owned by: (i) an Acquiring Person or any Associate or Affiliate of an Acquiring Person, (ii) a transferee of an Acquiring Person (or of any such Associate or Affiliate) who becomes a transferee after the Acquiring Person becomes such, or (iii) a transferee of an Acquiring Person (or of any such Associate or Affiliate) who becomes a transferee prior to or concurrently with the Acquiring Person becoming such and receives such Rights pursuant to either (A) a transfer (whether or not for consideration) from the Acquiring Person to holders of equity interests in such Acquiring Person or to any Person with whom such Acquiring Person has any continuing agreement, arrangement or understanding regarding the transferred Rights or (B) a transfer which the Board of Directors of the Company has determined is part of a plan, arrangement or understanding which has as a primary purpose or effect avoidance of Section 7(e) hereof, and any Rights Certificate issued pursuant to Section 6 or Section 11

hereof upon transfer, exchange, replacement or adjustment of any other Rights Certificate referred to in this sentence, shall contain (to the extent feasible) the following legend:

The Rights represented by this Rights Certificate are or were beneficially owned by a Person who was or became an Acquiring Person or an Affiliate or Associate of an Acquiring Person (as such terms are defined in the Rights Agreement). Accordingly, this Rights Certificate and the Rights represented hereby may become null and void in the circumstances specified in Section 7(e) of such Agreement.

Section 5. Countersignature and Registration.  
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(a) The Rights Certificates shall be executed on behalf of the Company by its Chairman of the Board, its Vice Chairman, its President or any Vice President, either manually or by facsimile signature, and shall have affixed thereto the Company's seal or a facsimile thereof which shall be attested by the Secretary or an Assistant Secretary of the Company, either manually or by facsimile signature. The Rights Certificates shall be countersigned by the Rights Agent, either manually or by facsimile signature and shall not be valid for any purpose unless so countersigned. In case any officer of the Company who shall have signed any of the Rights Certificates shall cease to be such officer of the Company before countersignature by the Rights Agent and issu-

ance and delivery by the Company, such Rights Certificates, nevertheless, may be countersigned by the Rights Agent and issued and delivered by the Company with the same force and effect as though the person who signed such Rights Certificates had not ceased to be such officer of the Company; and any Rights Certificates may be signed on behalf of the Company by any person who, at the actual date of the execution of such Rights Certificate, shall be a proper officer of the Company to sign such Rights Certificate, although at the date of the execution of this Rights Agreement any such person was not such an officer.

(b) Following the Distribution Date, the Rights Agent will keep or cause to be kept, at its principal office or offices designated as the appropriate place for surrender of Rights Certificates upon exercise or transfer, books for registration and transfer of the Rights Certificates issued hereunder. Such books shall show the names and addresses of the respective holders of the Rights Certificates, the number of Rights evidenced on its face by each of the Rights Certificates and the date of each of the Rights Certificates.

Section 6. Transfer, Split Up, Combination and Exchange of Rights

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Certificates; Mutilated, Destroyed, Lost or Stolen Rights Certificates. (a)  
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Subject to the provisions of Section 4(b), Section 7(e) and Section 14 hereof, at any time after the close of business on the Distribution Date, and at or prior to the close of business on the Expiration Date, any Rights Certificate or Certificates may be transferred, split up, combined or exchanged for another Rights Certificate or Certificates, entitling the registered holder to purchase a like number of one onethousandths of a share of Preferred Stock (or, following a Triggering Event, Common Stock, other securities, cash or other assets, as the case may be) as the Rights Certificate or Certificates surrendered then entitled such holder (or former holder in the case of a transfer) to purchase. Any registered holder desiring to transfer, split up, combine or exchange any Rights Certificate or Certificates shall make such request in writing delivered to the Rights Agent, and shall surrender the Rights Certificate or Certificates to be transferred, split up, combined or exchanged at the principal office or offices of the Rights Agent designated for such purpose. Neither the Rights Agent nor the Company shall be obligated to take any action whatsoever

with respect to the transfer of any such surrendered Rights Certificate until the registered holder shall have completed and signed the certificate contained in the form of assignment on the reverse side of such Rights Certificate and shall have provided such additional evidence of the identity of the Beneficial Owner (or former Beneficial Owner) or Affiliates or Associates thereof as the Company shall reasonably request. Thereupon the Rights Agent shall, subject to Section 4(b), Section 7(e) and Section 14 hereof, countersign and deliver to the Person entitled thereto a Rights Certificate or Rights Certificates, as the case may be, as so requested. The Company may require payment of a sum sufficient to cover any tax or governmental charge that may be imposed in connection with any transfer, split up, combination or exchange of Rights Certificates.

(c) Upon receipt by the Company and the Rights Agent of evidence reasonably satisfactory to them of the loss, theft, destruction or mutilation of a Rights Certificate, and, in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to them, and reimbursement to the Company and the Rights Agent of all reasonable expenses incidental thereto, and upon surrender to the Rights Agent and cancellation of the

Rights Certificate if mutilated, the Company will execute and deliver a new Rights Certificate of like tenor to the Rights Agent for countersignature and delivery to the registered owner in lieu of the Rights Certificate so lost, stolen, destroyed or mutilated.

Section 7. Exercise of Rights; Purchase Price; Expiration Date of

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Rights. (a) Subject to Section 7(e) hereof, the registered holder of any Rights

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Certificate may exercise the Rights evidenced thereby (except as otherwise provided herein including, without limitation, the restrictions on exercisability set forth in Section 9(c), Section 11(a)(iii) and Section 23(a) hereof) in whole or in part at any time after the Distribution Date upon surrender of the Rights Certificate, with the form of election to purchase and the certificate on the reverse side thereof duly executed, to the Rights Agent at the principal office or offices of the Rights Agent designated for such purpose, together with payment of the aggregate Purchase Price with respect to the total number of one onethousandths of a share (or other securities, cash or other assets, as the case may be) as to which such surrendered Rights are then exercisable, at or prior to the earlier of (i) the close of business on February 21, 2007, (the "Final Expiration Date"), or (ii) the time at

which the Rights are redeemed as provided in Section 23 hereof (the earlier of (i) and (ii) being herein referred to as the "Expiration Date").

(b) The Purchase Price for each one one-thousandth of a share of Preferred Stock pursuant to the exercise of a Right shall initially be \$225, and shall be subject to adjustment from time to time as provided in Sections 11 and 13(a) hereof and shall be payable in accordance with paragraph (c) below.

(c) Upon receipt of a Rights Certificate representing exercisable Rights, with the form of election to purchase and the certificate duly executed, accompanied by payment, with respect to each Right so exercised, of the Purchase Price per one one-thousandth of a share of Preferred Stock (or other shares, securities, cash or other assets, as the case may be) to be purchased as set forth below and an amount equal to any applicable transfer tax, the Rights Agent shall, subject to Section 20(k) hereof, thereupon promptly (i) (A) requisition from any transfer agent of the shares of Preferred Stock (or make available, if the Rights Agent is the transfer agent for such shares) certificates for the total number of one one-thousandths of a share of Preferred Stock to be purchased and the Company hereby

irrevocably authorizes its transfer agent to comply with all such requests, or (B) if the Company shall have elected to deposit the total number of shares of Preferred Stock issuable upon exercise of the Rights hereunder with a depositary agent, requisition from the depositary agent depositary receipts representing such number of one onethousandths of a share of Preferred Stock as are to be purchased (in which case certificates for the shares of Preferred Stock represented by such receipts shall be deposited by the transfer agent with the depositary agent) and the Company will direct the depositary agent to comply with such request, (ii) requisition from the Company the amount of cash, if any, to be paid in lieu of fractional shares in accordance with Section 14 hereof, (iii) after receipt of such certificates or depositary receipts, cause the same to be delivered to, or upon the order of, the registered holder of such Rights Certificate, registered in such name or names as may be designated by such holder, and (iv) after receipt thereof, deliver such cash, if any, to, or upon the order of, the registered holder of such Rights Certificate. The payment of the Purchase Price (as such amount may be reduced pursuant to Section 11(a)(iii) hereof) shall be made in cash or by certified bank check or bank draft

payable to the order of the Company. In the event that the Company is obligated to issue other securities (including Common Stock) of the Company, pay cash and/or distribute other property pursuant to Section 11(a) hereof, the Company will make all arrangements necessary so that such other securities, cash and/or other property are available for distribution by the Rights Agent, if and when appropriate. The Company reserves the right to require prior to the occurrence of a Triggering Event that, upon any exercise of Rights, a number of Rights be exercised so that only whole shares of Preferred Stock would be issued.

(d) In case the registered holder of any Rights Certificate shall exercise less than all the Rights evidenced thereby, a new Rights Certificate evidencing Rights equivalent to the Rights remaining unexercised shall be issued by the Rights Agent and delivered to, or upon the order of, the registered holder of such Rights Certificate, registered in such name or names as may be designated by such holder, subject to the provisions of Section 14 hereof.

(e) Notwithstanding anything in this Agreement to the contrary, from and after the first occurrence of a Section 11(a)(ii) Event, any Rights

beneficially owned by (i) an Acquiring Person or an Associate or Affiliate of an Acquiring Person, (ii) a transferee of an Acquiring Person (or of any such Associate or Affiliate) who becomes a transferee after the Acquiring Person becomes such, or (iii) a transferee of an Acquiring Person (or of any such Associate or Affiliate) who becomes a transferee prior to or concurrently with the Acquiring Person becoming such and receives such Rights pursuant to either (A) a transfer (whether or not for consideration) from the Acquiring Person to holders of equity interests in such Acquiring Person or to any Person with whom the Acquiring Person has any continuing agreement, arrangement or understanding regarding the transferred Rights or (B) a transfer which a majority of the Board of Directors of the Company has determined is part of a plan, arrangement or understanding which has as a primary purpose or effect the avoidance of this Section 7(e), shall become null and void without any further action and no holder of such Rights shall have any rights whatsoever with respect to such Rights, whether under any provision of this Agreement or otherwise. The Company shall use all reasonable efforts to insure that the provisions of this Section 7(e) and Section 4(b) hereof are complied with, but shall

have no liability to any holder of Rights Certificates or other Person as a result of its failure to make any determinations with respect to an Acquiring Person or its Affiliates, Associates or transferees hereunder.

(f) Notwithstanding anything in this Agreement to the contrary, neither the Rights Agent nor the Company shall be obligated to undertake any action with respect to a registered holder upon the occurrence of any purported exercise as set forth in this Section 7 unless such registered holder shall have (i) completed and signed the certificate contained in the form of election to purchase set forth on the reverse side of the Rights Certificate surrendered for such exercise, and (ii) provided such additional evidence of the identity of the Beneficial Owner (or former Beneficial Owner) or Affiliates or Associates thereof as the Company shall reasonably request.

Section 8. Cancellation and Destruction of Rights Certificates. All

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Rights Certificates surrendered for the purpose of exercise, transfer, split up, combination or exchange shall, if surrendered to the Company or any of its agents, be delivered to the Rights Agent for cancellation or in cancelled form, or, if surrendered to the Rights Agent, shall be cancelled by it, and no

Rights Certificates shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Agreement. The Company shall deliver to the Rights Agent for cancellation and retirement, and the Rights Agent shall so cancel and retire, any other Rights Certificate purchased or acquired by the Company otherwise than upon the exercise thereof. The Rights Agent shall deliver from time to time all cancelled Rights Certificates to the Company.

Section 9. Reservation and Availability of Capital Stock. (a) The

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Company covenants and agrees that it will cause to be reserved and kept available out of its authorized and unissued shares of Preferred Stock (and, following the occurrence of a Triggering Event, out of its authorized and unissued Common Stock and/or other securities or out of its authorized and issued shares held in its treasury), the number of shares of Preferred Stock (and, following the occurrence of a Triggering Event, Common Stock and/or other securities) that, as provided in this Agreement including Section 11(a)(iii) hereof, will be sufficient to permit the exercise in full of all outstanding Rights.

(c) So long as the shares of Preferred Stock (and, following the occurrence of a Triggering

Event, Common Stock and/or other securities) issuable and deliverable upon the exercise of the Rights may be listed on any national securities exchange, the Company shall use its best efforts to cause, from and after such time as the Rights become exercisable, all shares reserved for such issuance to be listed on such exchange upon official notice of issuance upon such exercise.

(d) The Company shall use its best efforts to (i) file, as soon as practicable following the earliest date after the first occurrence of a Section 11(a)(ii) Event on which the consideration to be delivered by the Company upon exercise of the Rights has been determined in accordance with Section 11(a)(iii) hereof, a registration statement under the Securities Act of 1933 (the "Act"), with respect to the securities purchasable upon exercise of the Rights on an appropriate form, (ii) cause such registration statement to become effective as soon as practicable after such filing, and (iii) cause such registration statement to remain effective (with a prospectus at all times meeting the requirements of the Act) until the earlier of (A) the date as of which the Rights are no longer exercisable for such securities, and (B) the date of the expiration of the Rights. The Company will also take such action as may be

appropriate under, or to ensure compliance with, the securities or "blue sky" laws of the various states in connection with the exercisability of the Rights. The Company may temporarily suspend, for a period of time not to exceed ninety (90) days after the date set forth in clause (i) of the first sentence of this Section 9(c), the exercisability of the Rights in order to prepare and file such registration statement and permit it to become effective. Upon any such suspension, the Company shall issue a public announcement stating that the exercisability of the Rights has been temporarily suspended, as well as a public announcement at such time as the suspension is no longer in effect. In addition, if the Company shall determine that a registration statement is required following the Distribution Date, the Company may temporarily suspend the exercisability of the Rights until such time as a registration statement has been declared effective. Notwithstanding any provision of this Agreement to the contrary, the Rights shall not be exercisable in any jurisdiction if the requisite qualification in such jurisdiction shall not have been obtained, the exercise thereof shall not be permitted under applicable law or a registration statement shall not have been declared effective.

(d) The Company covenants and agrees that it will take all such action as may be necessary to ensure that all one onethousandths of a share of Preferred Stock (and, following the occurrence of a Triggering Event, Common Stock and/or other securities) delivered upon exercise of Rights shall, at the time of delivery of the certificates for such shares (subject to payment of the Purchase Price), be duly and validly authorized and issued and fully paid and nonassessable.

(e) The Company further covenants and agrees that it will pay when due and payable any and all federal and state transfer taxes and charges which may be payable in respect of the issuance or delivery of the Rights Certificates and of any certificates for a number of one onethousandths of a share of Preferred Stock (or Common Stock and/or other securities, as the case may be) upon the exercise of Rights. The Company shall not, however, be required to pay any transfer tax which may be payable in respect of any transfer or delivery of Rights Certificates to a Person other than, or the issuance or delivery of a number of one onethousandths of a share of Preferred Stock (or Common Stock and/or other securities, as the case may be) in respect of a name other than that of, the registered holder of the Rights Certificates

evidencing Rights surrendered for exercise or to issue or deliver any certificates for a number of one onethousandths of a share of Preferred Stock (or Common Stock and/or other securities, as the case may be) in a name other than that of the registered holder upon the exercise of any Rights until such tax shall have been paid (any such tax being payable by the holder of such Rights Certificate at the time of surrender) or until it has been established to the Company's satisfaction that no such tax is due.

Section 10. Preferred Stock Record Date. Each person in whose name any  
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certificate for a number of one onethousandths of a share of Preferred Stock (or Common Stock and/or other securities, as the case may be) is issued upon the exercise of Rights shall for all purposes be deemed to have become the holder of record of such fractional shares of Preferred Stock (or Common Stock and/or other securities, as the case may be) represented thereby on, and such certificate shall be dated, the date upon which the Rights Certificate evidencing such Rights was duly surrendered and payment of the Purchase Price (and all applicable transfer taxes) was made; provided, however, that if the  
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date of such surrender and payment is a date upon which the Preferred Stock (or Common Stock

and/or other securities, as the case may be) transfer books of the Company are closed, such Person shall be deemed to have become the record holder of such shares (fractional or otherwise) on, and such certificate shall be dated, the next succeeding Business Day on which the Preferred Stock (or Common Stock and/or other securities, as the case may be) transfer books of the Company are open. Prior to the exercise of the Rights evidenced thereby, the holder of a Rights Certificate shall not be entitled to any rights of a shareholder of the Company with respect to shares for which the Rights shall be exercisable, including, without limitation, the right to vote, to receive dividends or other distributions or to exercise any preemptive rights, and shall not be entitled to receive any notice of any proceedings of the Company, except as provided herein.

Section 11. Adjustment of Purchase Price, Number and Kind of Shares or

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Number of Rights. The Purchase Price, the number and kind of shares covered by

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each Right and the number of Rights outstanding are subject to adjustment from time to time as provided in this Section 11.

(a)(i) In the event the Company shall at any time after the date of this

Agreement (A) declare a dividend on the Preferred Stock payable in shares of Preferred Stock, (B) subdivide the outstanding Preferred Stock, (C) combine the outstanding Preferred Stock into a smaller number of shares, or (D) issue any shares of its capital stock in a reclassification of the Preferred Stock (including any such reclassification in connection with a consolidation or merger in which the Company is the continuing or surviving corporation), except as otherwise provided in this Section 11(a) and Section 7(e) hereof, the Purchase Price in effect at the time of the record date for such dividend or of the effective date of such subdivision, combination or reclassification, and the number and kind of shares of Preferred Stock or capital stock, as the case may be, issuable on such date, shall be proportionately adjusted so that the holder of any Right exercised after such time shall be entitled to receive, upon payment of the Purchase Price then in effect, the aggregate number and kind of shares of Preferred Stock or capital stock, as the case may be, which, if

such Right had been exercised immediately prior to such date and at a time when the Preferred Stock transfer books of the Company were open, he or she would have owned upon such exercise and been entitled to receive by virtue of such dividend, subdivision, combination or reclassification. If an event occurs which would require an adjustment under both this Section 11(a)(i) and Section 11(a)(ii) hereof, the adjustment provided for in this Section 11(a)(i) shall be in addition to, and shall be made prior to, any adjustment required pursuant to Section 11(a)(ii) hereof.

(ii) In the event that any Person (other than the Company, any Subsidiary of the Company, any employee benefit plan of the Company or of any Subsidiary of the Company, any Person or entity organized, appointed or established by the Company for or pursuant to the terms of any such plan), alone or together with its Affiliates and Associates, shall, at any time after the Rights Dividend Declaration Date, become, after excluding any Exempted Shares, the Beneficial Owner of 15% or more of

the shares of Common Stock then outstanding, unless the event causing the 15% threshold to be crossed is a transaction set forth in Section 13(a) hereof, or is an acquisition of shares of Common Stock pursuant to a tender offer or an exchange offer for all outstanding shares of Common Stock at a price and on terms determined by at least a majority of the members of the Board of Directors who are not officers of the Company and who are not representatives, nominees, Affiliates or Associates of an Acquiring Person, after receiving advice from one or more investment banking firms, to be (a) at a price which is fair to shareholders (taking into account all factors which such members of the Board deem relevant including, without limitation, prices which could reasonably be achieved if the Company or its assets were sold on an orderly basis designed to realize maximum value) and (b) otherwise in the best interests of the Company and its shareholders (hereinafter, a "Qualifying Offer"), then, promptly following the occurrence of any such event, proper provision shall be made so

that each holder of a Right (except as provided below and in Section 7(e) hereof) shall thereafter have the right to receive, upon exercise thereof at the then current Purchase Price in accordance with the terms of this Agreement, in lieu of a number of one one-thousandths of a share of Preferred Stock, such number of shares of Common Stock of the Company as shall equal the result obtained by (x) multiplying the then current Purchase Price by the then number of one one-thousandths of a share of Preferred Stock for which a Right was exercisable immediately prior to the first occurrence of a Section 11(a)(ii) Event, and (y) dividing that product (which, following such first occurrence, shall thereafter be referred to as the "Purchase Price" for each Right and for all purposes of this Agreement) by 50% of the current market price (determined pursuant to Section 11(d) hereof) per share of Common Stock on the date of such first occurrence (such number of shares, the "Adjustment Shares").

(iii) In the event that the number of shares of Common Stock which are authorized

by the Company's Restated Articles, as amended, but not outstanding or reserved for issuance for purposes other than upon exercise of the Rights are not sufficient to permit the exercise in full of the Rights in accordance with the foregoing subparagraph (ii) of this Section 11(a), the Company shall (A) determine the value of the Adjustment Shares issuable upon the exercise of a Right (the "Current Value"), and (B) with respect to each Right (subject to Section 7(e) hereof), make adequate provision to substitute for the Adjustment Shares, upon the exercise of a Right and payment of the applicable Purchase Price, (1) cash, (2) a reduction in the Purchase Price, (3) shares of Common Stock or other equity securities of the Company (including, without limitation, shares, or units of shares, of preferred stock, such as the Preferred Stock, which the Board has deemed to have essentially the same value or economic rights as shares of Common Stock (such shares of preferred stock being referred to as "Common Share Equivalents")), (4) debt securities of the Company, (5) other assets, or (6) any com-

mination of the foregoing, having an aggregate value equal to the Current Value (less the amount of any reduction in the Purchase Price), where such aggregate value has been determined by the Board based upon the advice of a nationally recognized investment banking firm selected by the Board; provided, however, that if the Company shall not have made adequate provision to deliver value pursuant to clause (B) above within thirty (30) days following the later of (x) the first occurrence of a Section 11(a)(ii) Event and (y) the date on which the Company's right of redemption pursuant to Section 23(a) expires (the later of (x) and (y) being referred to herein as the "Section 11(a) (ii) Trigger Date"), then the Company shall be obligated to deliver, upon the surrender for exercise of a Right and without requiring payment of the Purchase Price, shares of Common Stock (to the extent available) and then, if necessary, cash, which shares and/or cash have an aggregate value equal to the Spread. For purposes of the preceding sentence, the term "Spread" shall mean the excess of (i) the Cur-

rent Value over (ii) the Purchase Price. If the Board determines in good faith that it is likely that sufficient additional shares of Common Stock could be authorized for issuance upon exercise in full of the Rights, the thirty (30) day period set forth above may be extended to the extent necessary, but not more than ninety (90) days after the Section 11(a)(ii) Trigger Date, in order that the Company may seek shareholder approval for the authorization of such additional shares (such thirty (30) day period, as it may be extended, is herein called the "Substitution Period"). To the extent that action is to be taken pursuant to the first and/or third sentences of this Section 11(a)(iii), the Company (1) shall provide, subject to Section 7(e) hereof, that such action shall apply uniformly to all outstanding Rights, and (2) may suspend the exercisability of the Rights until the expiration of the Substitution Period in order to seek such shareholder approval for such authorization of additional shares and/or to decide the appropriate form of distribution to be made pursuant to such first

sentence and to determine the value thereof. In the event of any such suspension, the Company shall issue a public announcement stating that the exercisability of the Rights has been temporarily suspended, as well as a public announcement at such time as the suspension is no longer in effect. For purposes of this Section 11(a)(iii), the value of each Adjustment Share shall be the Current Market Price per share of Common Stock on the Section 11(a)(ii) Trigger Date and the per share or per unit value of any Common Share Equivalent shall be deemed to equal the Current Market Price per share of Common Stock on such date.

(b) In case the Company shall fix a record date for the issuance of rights, options or warrants to all holders of Preferred Stock entitling them to subscribe for or purchase (for a period expiring within forty-five (45) calendar days after such record date) Preferred Stock (or shares having the same rights, privileges and preferences as the shares of Preferred Stock ("equivalent preferred stock")) or securities convertible into Preferred Stock or equivalent preferred stock at a price per share of Preferred Stock or per

share of equivalent preferred stock (or having a conversion price per share, if a security convertible into Preferred Stock or equivalent preferred stock) less than the current market price (as determined pursuant to Section 11(d) hereof) per share of Preferred Stock on such record date, the Purchase Price to be in effect after such record date shall be determined by multiplying the Purchase Price in effect immediately prior to such record date by a fraction, the numerator of which shall be the number of shares of Preferred Stock outstanding on such record date, plus the number of shares of Preferred Stock which the aggregate offering price of the total number of shares of Preferred Stock and/or equivalent preferred stock so to be offered (and/or the aggregate initial conversion price of the convertible securities so to be offered) would purchase at such current market price, and the denominator of which shall be the number of shares of Preferred Stock outstanding on such record date, plus the number of additional shares of Preferred Stock and/or equivalent preferred stock to be offered for subscription or purchase (or into which the convertible securities so to be offered are initially convertible). In case such subscription price may be paid by delivery of consideration part or all of which may be in a form

other than cash, the value of such consideration shall be as determined in good faith by the Board of Directors of the Company, whose determination shall be described in a statement filed with the Rights Agent and shall be binding on the Rights Agent and the holders of the Rights. Shares of Preferred Stock owned by or held for the account of the Company shall not be deemed outstanding for the purpose of any such computation. Such adjustment shall be made successively whenever such a record date is fixed, and in the event that such rights or warrants are not so issued, the Purchase Price shall be adjusted to be the Purchase Price which would then be in effect if such record date had not been fixed.

(d) In case the Company shall fix a record date for a distribution to all holders of Preferred Stock (including any such distribution made in connection with a consolidation or merger in which the Company is the continuing corporation) of evidences of indebtedness, cash (other than a regular quarterly cash dividend out of the earnings or retained earnings of the Company), assets (other than a dividend payable in Preferred Stock, but including any dividend payable in stock other than Preferred Stock) or subscription rights or warrants (excluding those referred to in Section 11(b))

hereof), the Purchase Price to be in effect after such record date shall be determined by multiplying the Purchase Price in effect immediately prior to such record date by a fraction, the numerator of which shall be the current market price (as determined pursuant to Section 11(d) hereof) per share of Preferred Stock on such record date, less the fair market value (as determined in good faith by the Board of Directors of the Company, whose determination shall be described in a statement filed with the Rights Agent) of the portion of the cash, assets or evidences of indebtedness so to be distributed or of such subscription rights or warrants applicable to a share of Preferred Stock and the denominator of which shall be such current market price (as determined pursuant to Section 11(d) hereof) per share of Preferred Stock. Such adjustments shall be made successively whenever such a record date is fixed, and in the event that such distribution is not so made, the Purchase Price shall be adjusted to be the Purchase Price which would have been in effect if such record date had not been fixed.

(d) (i) For the purpose of any computation hereunder, other than computations made pursuant to Section 11(a)(iii) hereof, the Current Market Price

per share of Common Stock on any date shall be deemed to be the average of the daily closing prices per such share of Common Stock for the thirty (30) consecutive Trading Days immediately prior to such date, and for purposes of computations made pursuant to Section 11(a)(iii) hereof, the Current Market Price per share of Common Stock on any date shall be deemed to be the average of the daily closing prices per such share of Common Stock for the ten (10) consecutive Trading Days immediately following such date; provided, however, that in the event that the Current Market Price per share of Common Stock is determined during a period following the announcement by the issuer of such Common Stock of (A) a dividend or distribution on such Common Stock payable in such shares of Common Stock or securities convertible into shares of such Common Stock (other than the Rights), or (B) any subdivision, combination or reclassification of such Common Stock, and the exdividend date for such dividend or distribution, or the record date for such subdivision, combination or reclassification shall not have occurred prior to the commencement of the requisite thirty (30) Trading Day or ten (10) Trading Day period, as set forth above, then, and in each such case, the Current Market Price shall be properly adjusted to take into account

exdividend trading. The closing price for each day shall be the last sale price, regular way, or, in case no such sale takes place on such day, the average of the closing bid and asked prices, regular way, in either case as reported in the principal consolidated transaction reporting system with respect to securities listed or admitted to trading on the New York Stock Exchange or, if the Common Stock is not listed or admitted to trading on the New York Stock Exchange, as reported in the principal consolidated transaction reporting system with respect to securities listed on the principal national securities exchange on which the Common Stock is listed or admitted to trading or, if the Common Stock is not listed or admitted to trading on any national securities exchange, the last quoted price or, if not so quoted, the average of the high bid and low asked prices in the over-the-counter market, as reported by the National Association of Securities Dealers, Inc. Automated Quotation System (the "NASDAQ") or such other system then in use, or, if on any such date the Common Stock is not quoted by any such organization, the average of the closing bid and asked prices as furnished by a professional market maker making a market in the Common Stock selected by the Board. If on any such date no market maker is making a

market in the Common Stock, the fair value of such shares on such date as determined in good faith by the Board shall be used. The term "Trading Day" shall mean a day on which the principal national securities exchange on which the Common Stock is listed or admitted to trading is open for the transaction of business or, if the Common Stock is not listed or admitted to trading on any national securities exchange, a Business Day. If the Common Stock is not publicly held or not so listed or traded, Current Market Price per share shall mean the fair value per share as determined in good faith by the Board, whose determination shall be described in a statement filed with the Rights Agent and shall be conclusive for all purposes.

(ii) For the purpose of any computation hereunder, the Current Market Price per share of Preferred Stock shall be determined in the same manner as set forth above for the Common Stock in clause (i) of this Section 11(d) (other than the last sentence thereof). If the Current Market Price per share of Preferred Stock cannot be determined in the manner provided above or if the Preferred Stock is not publicly held or listed or traded in a manner described in clause (i) of this Section 11(d), the Current Market Price per share of

Preferred Stock shall be conclusively deemed to be an amount equal to 1,000 (as such number may be appropriately adjusted for such events as stock splits, stock dividends and recapitalizations with respect to the Common Stock occurring after the date of this Agreement) multiplied by the Current Market Price per share of Common Stock. If neither the Common Stock nor the Preferred Stock is publicly held or so listed or traded, Current Market Price per share of the Preferred Stock shall mean the fair value per share as determined in good faith by the Board, whose determination shall be described in a statement filed with the Rights Agent and shall be conclusive for all purposes.

(e) Anything herein to the contrary notwithstanding, no adjustment in the Purchase Price shall be required unless such adjustment would require an increase or decrease of at least one percent (1%) in the Purchase Price; provided, however, that any adjustments which by reason of this Section 11(e) are not required to be made shall be carried forward and taken into account in any subsequent adjustment. All calculations under this Section 11 shall be made to the nearest cent or to the nearest ten-thousandth of a share of Common Stock or other share or one-ten millionth of a share of Preferred

Stock, as the case may be. Notwithstanding the first sentence of this Section 11(e), any adjustment required by this Section 11 shall be made no later than the earlier of (i) three (3) years from the date of the transaction which mandates such adjustment, or (ii) the Expiration Date.

(f) If as a result of an adjustment made pursuant to Section 11(a)(ii) or Section 13(a) hereof, the holder of any Right thereafter exercised shall become entitled to receive any shares of capital stock other than Preferred Stock, thereafter the number of such other shares so receivable upon exercise of any Right and the Purchase Price thereof shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the Preferred Stock contained in Sections 11(a), (b), (c), (e), (g), (h), (i), (j), (k) and (m), and the provisions of Sections 7, 9, 10, 13 and 14 hereof with respect to the Preferred Stock shall apply on like terms to any such other shares.

(f) All Rights originally issued by the Company subsequent to any adjustment made to the Purchase Price hereunder shall evidence the right to purchase, at the adjusted Purchase Price, the number of one one-thous-

andths of a share of Preferred Stock purchasable from time to time hereunder upon exercise of the Rights, all subject to further adjustment as provided herein.

(h) Unless the Company shall have exercised its election as provided in Section 11(i), upon each adjustment of the Purchase Price as a result of the calculations made in Sections 11(b) and (c), each Right outstanding immediately prior to the making of such adjustment shall thereafter evidence the right to purchase, at the adjusted Purchase Price, that number of one one-thousandths of a share of Preferred Stock (calculated to the nearest one-ten millionth) obtained by (i) multiplying (x) the number of one one-thousandths of a share covered by a Right immediately prior to this adjustment, by (y) the Purchase Price in effect immediately prior to such adjustment of the Purchase Price, and (ii) dividing the product so obtained by the Purchase Price in effect immediately after such adjustment of the Purchase Price.

(i) The Company may elect on or after the date of any adjustment of the Purchase Price to adjust the number of Rights, in lieu of any adjustment in the number of one one-thousandths of a share of Preferred Stock purchasable upon the exercise of a Right. Each of the Rights outstanding after the adjustment in the number

of Rights shall be exercisable for the number of one one-thousandths of a share of Preferred Stock for which a Right was exercisable immediately prior to such adjustment. Each Right held of record prior to such adjustment of the number of Rights shall become that number of Rights (calculated to the nearest one-ten-thousandth) obtained by dividing the Purchase Price in effect immediately prior to adjustment of the Purchase Price by the Purchase Price in effect immediately after adjustment of the Purchase Price. The Company shall make a public announcement of its election to adjust the number of Rights, indicating the record date for the adjustment, and, if known at the time, the amount of the adjustment to be made. This record date may be the date on which the Purchase Price is adjusted or any day thereafter, but, if the Rights Certificates have been issued, shall be at least ten (10) days later than the date of the public announcement. If Rights Certificates have been issued, upon each adjustment of the number of Rights pursuant to this Section 11(i), the Company shall, as promptly as practicable, cause to be distributed to holders of record of Rights Certificates on such record date Rights Certificates evidencing, subject to Section 14 hereof, the additional Rights to which such holders

shall be entitled as a result of such adjustment, or, at the option of the Company, shall cause to be distributed to such holders of record in substitution and replacement for the Rights Certificates held by such holders prior to the date of adjustment, and upon surrender thereof, if required by the Company, new Rights Certificates evidencing all the Rights to which such holders shall be entitled after such adjustment. Rights Certificates so to be distributed shall be issued, executed and countersigned in the manner provided for herein (and may bear, at the option of the Company, the adjusted Purchase Price) and shall be registered in the names of the holders of record of Rights Certificates on the record date specified in the public announcement.

(j) Irrespective of any adjustment or change in the Purchase Price or the number of one one-thousandth of a share of Preferred Stock issuable upon the exercise of the Rights, the Rights Certificates theretofore and thereafter issued may continue to express the Purchase Price per one one-thousandth of a share and the number of one one-thousandth of a share which were expressed in the initial Rights Certificates issued hereunder.

(1) Before taking any action that would cause an adjustment reducing the Purchase Price below the then stated value, if any, of the number of one one-thousandths of a share of Preferred Stock issuable upon exercise of the Rights, the Company shall take any corporate action which may, in the opinion of its counsel, be necessary in order that the Company may validly and legally issue fully paid and nonassessable such number of one one-thousandth of a share of Preferred Stock at such adjusted Purchase Price.

(1) In any case in which this Section 11 shall require that an adjustment in the Purchase Price be made effective as of a record date for a specified event, the Company may elect to defer until the occurrence of such event the issuance to the holder of any Right exercised after such record date the number of one one-thousandths of a share of Preferred Stock and other capital stock or securities of the Company, if any, issuable upon such exercise over and above the number of one one-thousandths of a share of Preferred Stock and other capital stock or securities of the Company, if any, issuable upon such exercise on the basis of the Purchase Price in effect prior to such adjustment; provided, however, that the Company shall deliver to such holder a due bill or

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other appropriate instrument evidencing such holder's right to receive such additional shares (fractional or otherwise) or securities upon the occurrence of the event requiring such adjustment.

(m) Anything in this Section 11 to the contrary notwithstanding, the Company shall be entitled to make such reductions in the Purchase Price, in addition to those adjustments expressly required by this Section 11, as and to the extent that in their good faith judgment the Board of Directors of the Company shall determine to be advisable in order that any (i) consolidation or subdivision of the Preferred Stock, (ii) issuance wholly for cash of any shares of Preferred Stock at less than the current market price, (iii) issuance wholly for cash of shares of Preferred Stock or securities which by their terms are convertible into or exchangeable for shares of Preferred Stock, (iv) stock dividends or (v) issuance of rights, options or warrants referred to in this Section 11, hereafter made by the Company to holders of its Preferred Stock shall not be taxable to such shareholders.

(n) The Company covenants and agrees that it shall not, at any time after the Distribution Date, (i) consolidate with any other Person (other than a Sub-

sidiary of the Company in a transaction which complies with Section 11(o) hereof), (ii) merge with or into any other Person (other than a Subsidiary of the Company in a transaction which complies with Section 11(o) hereof), or (iii) sell or transfer (or permit any Subsidiary to sell or transfer), in one transaction, or a series of related transactions, assets or earning power aggregating more than 50% of the assets or earning power of the Company and its Subsidiaries (taken as a whole) to any other Person or Persons (other than the Company and/or any of its Subsidiaries in one or more transactions each of which complies with Section 11(o) hereof), if (x) at the time of or immediately after such consolidation, merger or sale there are any rights, warrants or other instruments or securities outstanding or agreements in effect which would substantially diminish or otherwise eliminate the benefits intended to be afforded by the Rights or (y) prior to, simultaneously with or immediately after such consolidation, merger or sale, the shareholders of the Person who constitutes, or would constitute, the "Principal Party" for purposes of Section 13(a) hereof shall have received a distribution of Rights previously owned by such Person or any of its Affiliates and Associates.

(o) The Company covenants and agrees that, after the Distribution Date, it will not, except as permitted by Section 23 or Section 27 hereof, take (or permit any Subsidiary to take) any action if at the time such action is taken it is reasonably foreseeable that such action will diminish substantially or otherwise eliminate the benefits intended to be afforded by the Rights.

(o) Anything in this Agreement to the contrary notwithstanding, in the event that the Company shall at any time after the Rights Dividend Declaration Date and prior to the Distribution Date (i) declare a dividend on the outstanding shares of Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding shares of Common Stock, or (iii) combine the outstanding shares of Common Stock into a smaller number of shares, the number of Rights associated with each share of Common Stock then outstanding, or issued or delivered thereafter but prior to the Distribution Date, shall be proportionately adjusted so that the number of Rights thereafter associated with each share of Common Stock following any such event shall equal the result obtained by multiplying the number of Rights associated with each share of Common Stock immediately prior to such

event by a fraction the numerator of which shall be the total number of shares of Common Stock outstanding immediately prior to the occurrence of the event and the denominator of which shall be the total number of shares of Common Stock outstanding immediately following the occurrence of such event.

Section 12. Certificate of Adjusted Purchase Price or Number of

Shares. Whenever an adjustment is made as provided in Section 11 and Section 13

hereof, the Company shall (a) promptly prepare a certificate setting forth such adjustment and a brief statement of the facts accounting for such adjustment, (b) promptly file with the Rights Agent, and with each transfer agent for the Preferred Stock and the Common Stock, a copy of such certificate, and (c) mail or cause the Rights Agent to mail a brief summary thereof to each holder of a Rights Certificate (or, if prior to the Distribution Date, to each holder of a certificate representing shares of Common Stock) in accordance with Section 26 hereof. The Rights Agent shall be fully protected in relying on any such certificate and on any adjustment therein contained.

Section 13. Consolidation, Merger or Sale or Transfer of Assets or

Earning Power.

(a) In the event that, following the Stock Acquisition Date, directly or indirectly, (x) the Company shall consolidate with, or merge with and into, any other Person (other than a Subsidiary of the Company in a transaction which complies with Section 11(o) hereof), and the Company shall not be the continuing or surviving corporation of such consolidation or merger, (y) any Person (other than a Subsidiary of the Company in a transaction which complies with Section 11(o) hereof) shall consolidate with, or merge with or into, the Company, and the Company shall be the continuing or surviving corporation of such consolidation or merger and, in connection with such consolidation or merger, all or part of the outstanding shares of Common Stock shall be changed into or exchanged for stock or other securities of any other Person or cash or any other property, or (z) the Company shall sell or otherwise transfer (or one or more of its Subsidiaries shall sell or otherwise transfer), in one transaction or a series of related transactions, assets or earning power aggregating more than 50% of the assets or earning power of the Company and its Subsidiaries (taken as a whole) to any Person or Persons (other than the Company or any Subsidiary of the Company in one or more transactions each of which complies with

Section 11(o) hereof), then, and in each such case (except as may be contemplated by Section 13(d) hereof), proper provision shall be made so that: (i) each holder of a Right, except as provided in Section 7(e) hereof, shall thereafter have the right to receive, upon the exercise thereof at the then current Purchase Price in accordance with the terms of this Agreement, such number of validly authorized and issued, fully paid, non-assessable and freely tradeable shares of Common Stock of the Principal Party (as such term is hereinafter defined), not subject to any liens, encumbrances, rights of first refusal or other adverse claims, as shall be equal to the result obtained by (1) multiplying the then current Purchase Price by the number of one one-thousandths of a share of Preferred Stock for which a Right is exercisable immediately prior to the first occurrence of a Section 13 Event (or, if a Section 11(a)(ii) Event has occurred prior to the first occurrence of a Section 13 Event, multiplying the number of such one one-thousandths of a share for which a Right was exercisable immediately prior to the first occurrence of a Section 11(a)(ii) Event by the Purchase Price in effect immediately prior to such first occurrence), and dividing that product (which, following the first occurrence of a Section 13 Event,

shall be referred to as the "Purchase Price" for each Right and for all purposes of this Agreement) by (2) 50% of the Current Market Price per share of the Common Stock of such Principal Party on the date of consummation of such Section 13 Event; (ii) such Principal Party shall thereafter be liable for, and shall assume, by virtue of such Section 13 Event, all the obligations and duties of the Company pursuant to this Agreement; (iii) the term "Company" shall thereafter be deemed to refer to such Principal Party, it being specifically intended that the provisions of Section 11 hereof shall apply only to such Principal Party following the first occurrence of a Section 13 Event; (iv) such Principal Party shall take such steps (including, but not limited to, the reservation of a sufficient number of shares of its Common Stock) in connection with the consummation of any such transaction as may be necessary to assure that the provisions hereof shall thereafter be applicable, as nearly as reasonably may be, in relation to its shares of Common Stock thereafter deliverable upon the exercise of the Rights; and (v) the provisions of Section 11(a)(ii) hereof shall be of no effect following the first occurrence of any Section 13 Event.

(b) "Principal Party" shall mean

(i) in the case of any transaction described in clause (x) or (y) of the first sentence of Section 13(a), the Person that is the issuer of any securities into which shares of Common Stock of the Company are converted in such merger or consolidation, and if no securities are so issued, the Person that is the other party to such merger or consolidation; and

(ii) in the case of any transaction described in clause (z) of the first sentence of Section 13(a), the Person that is the party receiving the greatest portion of the assets or earning power transferred pursuant to such transaction or transactions;

provided, however, that in any such case, (1) if the Common Stock of such Person

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is not at such time and has not been continuously over the preceding twelve (12) month period registered under Section 12 of the Exchange Act, and such Person is a direct or indirect Subsidiary of another Person the Common Stock of which is and has been so registered, "Principal Party" shall refer to such other Person; and (2) in case such Person is a Subsidiary, directly or indirectly, of more than one Person,

the Common Stocks of two or more of which are and have been so registered, "Principal Party" shall refer to whichever of such Persons is the issuer of the Common Stock having the greatest aggregate market value.

(c) The Company shall not consummate any such consolidation, merger, sale or transfer unless the Principal Party shall have a sufficient number of authorized shares of its Common Stock which have not been issued or reserved for issuance to permit the exercise in full of the Rights in accordance with this Section 13 and unless prior thereto the Company and such Principal Party shall have executed and delivered to the Rights Agent a supplemental agreement providing for the terms set forth in paragraphs (a) and (b) of this Section 13 and further providing that, as soon as practicable after the date of any consolidation, merger or sale of assets mentioned in paragraph (a) of this Section 13, the Principal Party will

(i) prepare and file a registration statement under the Act, with respect to the Rights and the securities purchasable upon exercise of the Rights on an appropriate form, and will use its best efforts to cause such registration statement to (A)

become effective as soon as practicable after such filing and (B) remain effective (with a prospectus at all times meeting the requirements of the Act) until the Expiration Date; and

(ii) will deliver to holders of the Rights historical financial statements for the Principal Party and each of its Affiliates which comply in all respects with the requirements for registration on Form 10 under the Exchange Act.

The provisions of this Section 13 shall similarly apply to successive mergers or consolidations or sales or other transfers. In the event that a Section 13 Event shall occur at any time after the occurrence of a Section 11(a)(ii) Event, the Rights which have not theretofore been exercised shall thereafter become exercisable in the manner described in Section 13(a).

(d) Notwithstanding anything in this Agreement to the contrary, Section 13 shall not be applicable to a transaction described in subparagraphs (x) and (y) of Section 13(a) if (i) such transaction is consummated with a Person or Persons who acquired shares of Common Stock pursuant to a Qualifying Offer (or a

wholly owned subsidiary of any such Person or Persons), (ii) the price per share of Common Stock offered in such transaction is not less than the price per share of Common Stock paid to all holders of shares of Common Stock whose shares were purchased pursuant to such tender offer or exchange offer and (iii) the form of consideration being offered to the remaining holders of shares of Common Stock pursuant to such transaction is the same as the form of consideration paid pursuant to such tender offer or exchange offer. Upon consummation of any such transaction contemplated by this Section 13(d), all Rights hereunder shall expire.

Section 14. Fractional Rights and Fractional Shares.  
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(a) The Company shall not be required to issue fractions of Rights, except prior to the Distribution Date as provided in Section 11(p) hereof, or to distribute Rights Certificates which evidence fractional Rights. In lieu of such fractional Rights, there shall be paid to the registered holders of the Rights Certificates with regard to which such fractional Rights would otherwise be issuable, an amount in cash equal to the same fraction of the current market value of a whole Right. For purposes of this Section 14(a), the current

market value of a whole Right shall be the closing price of the Rights for the Trading Day immediately prior to the date on which such fractional Rights would have been otherwise issuable. The closing price of the Rights for any day shall be the last sale price, regular way, or, in case no such sale takes place on such day, the average of the closing bid and asked prices, regular way, in either case as reported in the principal consolidated transaction reporting system with respect to securities listed or admitted to trading on the New York Stock Exchange or, if the Rights are not listed or admitted to trading on the New York Stock Exchange, as reported in the principal consolidated transaction reporting system with respect to securities listed on the principal national securities exchange on which the Rights are listed or admitted to trading, or if the Rights are not listed or admitted to trading on any national securities exchange, the last quoted price or, if not so quoted, the average of the high bid and low asked prices in the over-the-counter market, as reported by NASDAQ or such other system then in use or, if on any such date the Rights are not quoted by any such organization, the average of the closing bid and asked prices as furnished by a professional market maker making a market in the Rights selected by the Board

of Directors of the Company. If on any such date no such market maker is making a market in the Rights the fair value of the Rights on such date as determined in good faith by the Board of Directors of the Company shall be used.

(b) The Company shall not be required to issue fractions of shares of Preferred Stock (other than fractions which are integral multiples of one one-thousandth of a share of Preferred Stock) upon exercise of the Rights or to distribute certificates which evidence fractional shares of Preferred Stock (other than fractions which are integral multiples of one one-thousandth of a share of Preferred Stock). In lieu of fractional shares of Preferred Stock that are not integral multiples of one one-thousandth of a share of Preferred Stock, the Company may pay to the registered holders of Rights Certificates at the time such Rights are exercised as herein provided an amount in cash equal to the same fraction of the current market value of one one-thousandth of a share of Preferred Stock. For purposes of this Section 14(b), the current market value of one one-thousandth of a share of Preferred Stock shall be one one-thousandth of the closing price of a share of Preferred Stock (as determined pursuant to Section

11(d)(ii) hereof) for the Trading Day immediately prior to the date of such exercise.

(c) Following the occurrence of a Triggering Event, the Company shall not be required to issue fractions of shares of Common Stock upon exercise of the Rights or to distribute certificates which evidence fractional shares of Common Stock. In lieu of fractional shares of Common Stock, the Company may pay to the registered holders of Rights Certificates at the time such Rights are exercised as herein provided an amount in cash equal to the same fraction of the current market value of one (1) share of Common Stock. For purposes of this Section 14(c), the current market value of one share of Common Stock shall be the closing price of one share of Common Stock (as determined pursuant to Section 11(d)(i) hereof) for the Trading Day immediately prior to the date of such exercise.

(d) The holder of a Right by the acceptance of the Rights expressly waives his or her right to receive any fractional Rights or any fractional shares upon exercise of a Right, except as permitted by this Section 14.

Section 15. Rights of Action. All rights of action in respect of this Agreement are vested in the

respective registered holders of the Rights Certificates (and, prior to the Distribution Date, the registered holders of the Common Stock); and any registered holder of any Rights Certificate (or, prior to the Distribution Date, of the Common Stock), without the consent of the Rights Agent or of the holder of any other Rights Certificate (or, prior to the Distribution Date, of the Common Stock), may, in his or her own behalf and for his or her own benefit, enforce, and may institute and maintain any suit, action or proceeding against the Company to enforce, or otherwise act in respect of, his or her right to exercise the Rights evidenced by such Rights Certificate in the manner provided in such Rights Certificate and in this Agreement. Without limiting the foregoing or any remedies available to the holders of Rights, it is specifically acknowledged that the holders of Rights would not have an adequate remedy at law for any breach of this Agreement and shall be entitled to specific performance of the obligations hereunder and injunctive relief against actual or threatened violations of the obligations hereunder of any Person subject to this Agreement.

Section 16. Agreement of Rights Holders. Every holder of a Right by

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accepting the same consents

and agrees with the Company and the Rights Agent and with every other holder of a Right that:

(a) prior to the Distribution Date, the Rights will be transferable only in connection with the transfer of Common Stock;

(b) after the Distribution Date, the Rights Certificates are transferable only on the registry books of the Rights Agent if surrendered at the principal office or offices of the Rights Agent designated for such purposes, duly endorsed or accompanied by a proper instrument of transfer and with the appropriate forms and certificates fully executed;

(c) subject to Section 6(a) and Section 7(f) hereof, the Company and the Rights Agent may deem and treat the person in whose name a Rights Certificate (or, prior to the Distribution Date, the associated Common Stock certificate) is registered as the absolute owner thereof and of the Rights evidenced thereby (notwithstanding any notations of ownership or writing on the Rights Certificates or the associated Common Stock certificate made by anyone other than the Company or the Rights Agent) for all purposes whatsoever, and neither the Company nor the Rights Agent, subject to the last

sentence of Section 7(e) hereof, shall be required to be affected by any notice to the contrary; and

(d) notwithstanding anything in this Agreement to the contrary, neither the Company nor the Rights Agent shall have any liability to any holder of a Right or other Person as a result of its inability to perform any of its obligations under this Agreement by reason of any preliminary or permanent injunction or other order, decree or ruling issued by a court of competent jurisdiction or by a governmental, regulatory or administrative agency or commission, or any statute, rule, regulation or executive order promulgated or enacted by any governmental authority, prohibiting or otherwise restraining performance of such obligation; provided, however, the Company must use its best efforts to have any such order, decree or ruling lifted or otherwise overturned as soon as possible.

Section 17. Rights Certificate Holder Not Deemed a Shareholder. No

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holder, as such, of any Rights Certificate shall be entitled to vote, receive dividends or be deemed for any purpose the holder of the number of one one-thousandths of a share of Preferred Stock or any other securities of the Company which may at any time be issuable on the exercise of the Rights represented

thereby, nor shall anything contained herein or in any Rights Certificate be construed to confer upon the holder of any Rights Certificate, as such, any of the rights of a shareholder of the Company or any right to vote for the election of directors or upon any matter submitted to shareholders at any meeting thereof, or to give or withhold consent to any corporate action, or to receive notice of meetings or other actions affecting shareholders (except as provided in Section 24 hereof), or to receive dividends or subscription rights, or otherwise, until the Right or Rights evidenced by such Rights Certificate shall have been exercised in accordance with the provisions hereof.

Section 18. Concerning the Rights Agent.  
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(a) The Company agrees to pay to the Rights Agent reasonable compensation for all services rendered by it hereunder and, from time to time, on demand of the Rights Agent, its reasonable expenses and counsel fees and disbursements and other disbursements incurred in the administration and execution of this Agreement and the exercise and performance of its duties hereunder. The Company also agrees to indemnify the Rights Agent for, and to hold it harmless against, any loss, liability, or expense, incurred without negligence,

bad faith or willful misconduct on the part of the Rights Agent, for anything done or omitted by the Rights Agent in connection with the acceptance and administration of this Agreement, including the costs and expenses of defending against any claim of liability in the premises.

(b) The Rights Agent shall be protected and shall incur no liability for or in respect of any action taken, suffered or omitted by it in connection with its administration of this Agreement in reliance upon any Rights Certificate or certificate for Common Stock or for other securities of the Company, instrument of assignment or transfer, power of attorney, endorsement, affidavit, letter, notice, direction, consent, certificate, statement, or other paper or document believed by it to be genuine and to be signed, executed and, where necessary, verified or acknowledged, by the proper Person or Persons.

Section 19. Merger or Consolidation or Change of Name of Rights Agent.  
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(a) Any corporation into which the Rights Agent or any successor Rights Agent may be merged or with which it may be consolidated, or any corporation resulting from any merger or consolidation to which the Rights Agent or any successor Rights Agent shall be a party, or

any corporation succeeding to the corporate trust or shareholder services business of the Rights Agent or any successor Rights Agent, shall be the successor to the Rights Agent under this Agreement without the execution or filing of any paper or any further act on the part of any of the parties hereto; provided, however, that such corporation would be eligible for appointment as a successor Rights Agent under the provisions of Section 21 hereof. In case at the time such successor Rights Agent shall succeed to the agency created by this Agreement, any of the Rights Certificates shall have been countersigned but not delivered, any such successor Rights Agent may adopt the countersignature of a predecessor Rights Agent and deliver such Rights Certificates so countersigned; and in case at that time any of the Rights Certificates shall not have been countersigned, any successor Rights Agent may countersign such Rights Certificates either in the name of the predecessor or in the name of the successor Rights Agent; and in all such cases such Rights Certificates shall have the full force provided in the Rights Certificates and in this Agreement.

(b) In case at any time the name of the Rights Agent shall be changed and at such time any of the Rights Certificates shall have been countersigned but not

delivered, the Rights Agent may adopt the countersignature under its prior name and deliver Rights Certificates so countersigned; and in case at that time any of the Rights Certificates shall not have been countersigned, the Rights Agent may countersign such Rights Certificates either in its prior name or in its changed name; and in all such cases such Rights Certificates shall have the full force provided in the Rights Certificates and in this Agreement.

Section 20. Duties of Rights Agent. The Rights Agent undertakes the

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duties and obligations im-posed by this Agreement upon the following terms and conditions, by all of which the Company and the holders of Rights Certificates, by their acceptance thereof, shall be bound:

(a) The Rights Agent may consult with legal counsel (who may be legal counsel for the Company), and the opinion of such counsel shall be full and complete authorization and protection to the Rights Agent as to any action taken or omitted by it in good faith and in accordance with such opinion.

(b) Whenever in the performance of its duties under this Agreement the Rights Agent shall deem it necessary or desirable that any fact or matter

(including, without limitation, the identity of any Acquiring Person and the determination of "current market price") be proved or established by the Company prior to taking or suffering any action hereunder, such fact or matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a certificate signed by the Chairman of the Board, the President, any Vice President, the Treasurer, any Assistant Treasurer, the Secretary or any Assistant Secretary of the Company and delivered to the Rights Agent; and such certificate shall be full authorization to the Rights Agent for any action taken or suffered in good faith by it under the provisions of this Agreement in reliance upon such certificate.

(c) The Rights Agent shall be liable hereunder only for its own negligence, bad faith or willful misconduct.

(d) The Rights Agent shall not be liable for or by reason of any of the statements of fact or recitals contained in this Agreement or in the Rights Certificates or be required to verify the same (except as to its countersignature on such Rights Certificates), but

all such statements and recitals are and shall be deemed to have been made by the Company only.

(e) The Rights Agent shall not be under any responsibility in respect of the validity of this Agreement or the execution and delivery hereof (except the due execution hereof by the Rights Agent) or in respect of the validity or execution of any Rights Certificate (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Agreement or in any Rights Certificate; nor shall it be responsible for any adjustment required under the provisions of Section 11 or Section 13 hereof or responsible for the manner, method or amount of any such adjustment or the ascertaining of the existence of facts that would require any such adjustment (except with respect to the exercise of Rights evidenced by Rights Certificates after actual notice of any such adjustment); nor shall it by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of any shares of Common Stock or Preferred Stock to be issued pursuant to this Agreement or any Rights Certificate or as to whether any shares of Common Stock or Preferred Stock

will, when so issued, be validly authorized and issued, fully paid and nonassessable.

(f) The Company agrees that it will perform, execute, acknowledge and deliver or cause to be performed, executed, acknowledged and delivered all such further and other acts, instruments and assurances as may reasonably be required by the Rights Agent for the carrying out or performing by the Rights Agent of the provisions of this Agreement.

(g) The Rights Agent is hereby authorized and directed to accept instructions with respect to the performance of its duties hereunder from the Chairman of the Board, the President, any Vice President, the Secretary, any Assistant Secretary, the Treasurer or any Assistant Treasurer of the Company, and to apply to such officers for advice or instructions in connection with its duties, and it shall not be liable for any action taken or suffered to be taken by it in good faith in accordance with instructions of any such officer.

(h) The Rights Agent and any shareholder, director, officer or employee of the Rights Agent may buy, sell or deal in any of the Rights or other securities of the Company or become pecuniarily interested in any transaction in which the Company may be

interested, or contract with or lend money to the Company or otherwise act as fully and freely as though it were not Rights Agent under this Agreement. Nothing herein shall preclude the Rights Agent from acting in any other capacity for the Company or for any other legal entity.

(i) The Rights Agent may execute and exercise any of the rights or powers hereby vested in it or perform any duty hereunder either itself or by or through its attorneys or agents, and the Rights Agent shall not be answerable or accountable for any act, default, neglect or misconduct of any such attorneys or agents or for any loss to the Company resulting from any such act, default, neglect or misconduct; provided, however, reasonable care was exercised in the -----  
selection and continued employment thereof.

(j) No provision of this Agreement shall require the Rights Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder or in the exercise of its rights if there shall be reasonable grounds for believing that repayment of such funds or adequate indemnification against such risk or liability is not reasonably assured to it.

(k) If, with respect to any Right Certificate surrendered to the Rights Agent for exercise or transfer, the certificate attached to the form of assignment or form of election to purchase, as the case may be, has either not been completed or indicates an affirmative response to clause 1 and/or 2 thereof, the Rights Agent shall not take any further action with respect to such requested exercise of transfer without first consulting with the Company.

Section 21. Change of Rights Agent. The Rights Agent or any successor

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Rights Agent may resign and be discharged from its duties under this Agreement upon thirty (30) days' notice in writing mailed to the Company, and to each transfer agent of the Common Stock and Preferred Stock, by registered or certified mail, and to the holders of the Rights Certificates by firstclass mail. The Company may remove the Rights Agent or any successor Rights Agent upon thirty (30) days' notice in writing, mailed to the Rights Agent or successor Rights Agent, as the case may be, and to each transfer agent of the Common Stock and Preferred Stock, by registered or certified mail, and to the holders of the Rights Certificates by firstclass mail. If the Rights Agent shall resign or be removed or shall otherwise become incapable

of acting, the Company shall appoint a successor to the Rights Agent. If the Company shall fail to make such appointment within a period of thirty (30) days after giving notice of such removal or after it has been notified in writing of such resignation or incapacity by the resigning or incapacitated Rights Agent or by the holder of a Rights Certificate (who shall, with such notice, submit his Rights Certificate for inspection by the Company), then any registered holder of any Rights Certificate may apply to any court of competent jurisdiction for the appointment of a new Rights Agent. Any successor Rights Agent, whether appointed by the Company or by such a court, shall be a corporation organized and doing business under the laws of the United States or of the State of New York (or of any other state of the United States so long as such corporation is authorized to do business as a banking institution in the State of New York), in good standing, which is authorized under such laws to exercise corporate trust powers and is subject to supervision or examination by federal or state authority and which has at the time of its appointment as Rights Agent a combined capital and surplus of at least \$100,000,000. After appointment, the successor Rights Agent shall be vested with the same powers, rights,

duties and responsibilities as if it had been originally named as Rights Agent without further act or deed; but the predecessor Rights Agent shall deliver and transfer to the successor Rights Agent any property at the time held by it hereunder, and execute and deliver any further assurance, conveyance, act or deed necessary for the purpose. Not later than the effective date of any such appointment, the Company shall file notice thereof in writing with the predecessor Rights Agent and each transfer agent of the Common Stock and the Preferred Stock, and mail a notice thereof in writing to the registered holders of the Rights Certificates. Failure to give any notice provided for in this Section 21, however, or any defect therein, shall not affect the legality or validity of the resignation or removal of the Rights Agent or the appointment of the successor Rights Agent, as the case may be.

Section 22. Issuance of New Rights Certificates. Notwithstanding any

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of the provisions of this Agreement or of the Rights to the contrary, the Company may, at its option, issue new Rights Certificates evidencing Rights in such form as may be approved by its Board of Directors to reflect any adjustment or change in the Purchase Price and the number or kind or class of

shares or other securities or property purchasable under the Rights Certificates made in accordance with the provisions of this Agreement. In addition, in connection with the issuance or sale of shares of Common Stock following the Distribution Date and prior to the redemption or expiration of the Rights, the Company (a) shall, with respect to shares of Common Stock so issued or sold pursuant to the exercise of stock options or under any employee plan or arrangement, granted or awarded as of the Distribution Date, or upon the exercise, conversion or exchange of securities hereinafter issued by the Company, and (b) may, in any other case, if deemed necessary or appropriate by the Board of Directors of the Company, issue Rights Certificates representing the appropriate number of Rights in connection with such issuance or sale; provided, however, that (i) no such Rights Certificate shall be issued if, and to the extent that, the Company shall be advised by counsel that such issuance would create a significant risk of material adverse tax consequences to the Company or the Person to whom such Rights Certificate would be issued, and (ii) no such Rights Certificate shall be issued if, and to the extent that, appropriate adjustment shall otherwise have been made in lieu of the issuance thereof.

Section 23. Redemption and Termination.

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(a) The Board of Directors of the Company may, at its option, at any time prior to the earlier of (i) the close of business on the tenth day following the Stock Acquisition Date (or, if the Stock Acquisition Date shall have occurred prior to the Record Date, the close of business on the tenth day following the Record Date), or (ii) the Final Expiration Date, redeem all but not less than all the then outstanding Rights at a redemption price of \$0.01 per Right, as such amount may be appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date hereof (such redemption price being hereinafter referred to as the "Redemption Price"). Notwithstanding anything contained in this Agreement to the contrary, the Rights shall not be exercisable after the first occurrence of a Section 11(a)(ii) Event until such time as the Company's right of redemption hereunder has expired. The Company may, at its option, pay the Redemption Price in cash, shares of Common Stock (based on the "current market price", as defined in Section 11(d)(i) hereof, of the Common Stock at the time of redemption) or any other form of consideration deemed appropriate by the Board of Directors.

(b) Immediately upon the action of the Board of Directors of the Company ordering the redemption of the Rights, evidence of which shall have been filed with the Rights Agent and without any further action and without any notice, the right to exercise the Rights will terminate and the only right thereafter of the holders of Rights shall be to receive the Redemption Price for each Right so held. Promptly after the action of the Board of Directors ordering the redemption of the Rights, the Company shall give notice of such redemption to the Rights Agent and the holders of the then outstanding Rights by mailing such notice to all such holders at each holder's last address as it appears upon the registry books of the Rights Agent or, prior to the Distribution Date, on the registry books of the transfer agent for the Common Stock. Any notice which is mailed in the manner herein provided shall be deemed given, whether or not the holder receives the notice. Each such notice of redemption will state the method by which the payment of the Redemption Price will be made.

Section 24. Exchange  
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(a) The Board may, at its option, at any time after any Person becomes an Acquiring Person, exchange all or part of the then outstanding and exercis-

able Rights (which shall not include Rights that have become void pursuant to the provisions of Section 7(e) hereof) for Common Stock at an exchange ratio of one share of Common Stock per Right, appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date hereof (such exchange ratio being hereinafter referred to as the "Exchange Ratio"). Notwithstanding the foregoing, the Board shall not be empowered to effect such exchange at any time after any Person (other than the Company, any Subsidiary of the Company, any employee benefit plan of the Company or any such Subsidiary, any entity holding Common Stock for or pursuant to the terms of any such plan or any Exempt Person), together with all Affiliates and Associates of such Person, becomes the Beneficial Owner of 50% or more of the Common Stock then outstanding.

(b) Immediately upon the action of the Board ordering the exchange of any Rights pursuant to subsection (a) of this Section 24 and without any further action and without any notice, the right to exercise such Rights shall terminate and the only right thereafter of a holder of such Rights shall be to receive that number of shares of Common Stock equal to the number of such Rights held by such holder multiplied by the Exchange Ratio.

The Company shall promptly give public notice of any such exchange; provided, however, that the failure to give, or any defect in, such notice shall not affect the validity of such exchange. The Company promptly shall mail a notice of any such exchange to all of the holders of such Rights at their last addresses as they appear upon the registry books of the Rights Agent. Any notice which is mailed in the manner herein provided shall be deemed given, whether or not the holder receives the notice. Each such notice of exchange will state the method by which the exchange of the shares of Common Stock for Rights will be effected and, in the event of any partial exchange, the number of Rights which will be exchanged. Any partial exchange shall be effected pro rata based on the number of Rights (other than Rights which have become void pursuant to the provisions of Section 7(e) hereof) held by each holder of Rights.

(c) In an exchange pursuant to this Section 24, the Company, at its option, may substitute Preferred Stock (or equivalent preferred stock, as such term is defined in paragraph (b) of Section 11 hereof) for Common Stock exchangeable for rights, at the initial rate of one-one-thousandth of a share of Preferred Stock (or equivalent preferred stock) for each share of Common

Stock, as appropriately adjusted to reflect stock splits, stock dividends and other similar transactions after the date hereof.

(d) In the event that there shall not be sufficient Common Stock issued but not outstanding or authorized but unissued to permit any exchange of Rights as contemplated in accordance with this Section 24, the Company shall take all such action as may be necessary to authorize additional Common Stock for issuance upon exchange of the Rights.

(e) The Company shall not be required to issue fractions of shares of Common Stock or to distribute certificates which evidence fractional shares of Common Stock. In lieu of such fractional shares of Common Stock, there shall be paid to the registered holders of the Right Certificates with regard to which such fractional shares of Common Stock would otherwise be issuable, an amount in cash equal to the same fraction of the current market value of a whole share of Common Stock. For the purposes of this subsection (e), the current market value of a whole share of Common Stock shall be the closing price of a share of Common Stock (as determined pursuant to the second sentence of Section

11(d)(i) hereof) for the Trading Day immediately prior to the date of exchange pursuant to this Section 24. Section 25. Notice of Certain Events.

(a) In case the Company shall propose, at any time after the Distribution Date, (i) to pay any dividend payable in stock of any class to the holders of Preferred Stock or to make any other distribution to the holders of Preferred Stock (other than a regular quarterly cash dividend out of earnings or retained earnings of the Company), or (ii) to offer to the holders of Preferred Stock rights or warrants to subscribe for or to purchase any additional shares of Preferred Stock or shares of stock of any class or any other securities, rights or options, or (iii) to effect any reclassification of its Preferred Stock (other than a reclassification involving only the subdivision of outstanding shares of Preferred Stock), or (iv) to effect any consolidation or merger into or with any other Person (other than a Subsidiary of the Company in a transaction which complies with Section 11(o) hereof), or to effect any sale or other transfer (or to permit one or more of its Subsidiaries to effect any sale or other transfer), in one transaction or a series of related transactions, of more than 50% of the assets or earning power of the

Company and its Subsidiaries (taken as a whole) to any other Person or Persons (other than the Company and/or any of its Subsidiaries in one or more transactions each of which complies with Section 11(o) hereof), or (v) to effect the liquidation, dissolution or winding up of the Company, then, in each such case, the Company shall give to each holder of a Rights Certificate, to the extent feasible and in accordance with Section 26 hereof, a notice of such proposed action, which shall specify the record date for the purposes of such stock dividend, distribution of rights or warrants, or the date on which such reclassification, consolidation, merger, sale, transfer, liquidation, dissolution, or winding up is to take place and the date of participation therein by the holders of the shares of Preferred Stock, if any such date is to be fixed, and such notice shall be so given in the case of any action covered by clause (i) or (ii) above at least twenty (20) days prior to the record date for determining holders of the shares of Preferred Stock for purposes of such action, and in the case of any such other action, at least twenty (20) days prior to the date of the taking of such proposed action or the date of participation therein by the holders of the shares of Preferred Stock whichever shall be the earlier.

(b) In case any of the events set forth in Section 11(a)(ii) hereof shall occur, then, in any such case, (i) the Company shall as soon as practicable thereafter give to each holder of a Rights Certificate, to the extent feasible and in accordance with Section 25 hereof, a notice of the occurrence of such event, which shall specify the event and the consequences of the event to holders of Rights under Section 11(a)(ii) hereof, and (ii) all references in the preceding paragraph to Preferred Stock shall be deemed thereafter to refer to Common Stock and/or, if appropriate, other securities.

Section 26. Notices. Notices or demands authorized by this Agreement

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to be given or made by the Rights Agent or by the holder of any Rights Certificate to or on the Company shall be sufficiently given or made if sent by first-class mail, postage prepaid, addressed (until another address is filed in writing with the Rights Agent) as follows:

Mine Safety Appliances Company  
121 Gamma Drive RIDC Industrial Park  
O'Hara Township  
Pittsburgh, PA 15238  
Attention: General Counsel

Subject to the provisions of Section 21, any notice or demand authorized by this Agreement to be given or made

by the Company or by the holder of any Rights Certificate to or on the Rights Agent shall be sufficiently given or made if sent by first-class mail, postage prepaid, addressed (until another address is filed in writing with the Company) as follows:

Norwest Bank Minnesota, N.A.  
Shareholder Services  
P.O. Box 64854  
St. Paul, MN 55164-0854

Notices or demands authorized by this Agreement to be given or made by the Company or the Rights Agent to the holder of any Rights Certificate (or, if prior to the Distribution Date, to the holder of certificates representing shares of Common Stock) shall be sufficiently given or made if sent by first-class mail, postage prepaid, addressed to such holder at the address of such holder as shown on the registry books of the Company.

Section 27. Supplements and Amendments. Prior to the Distribution Date

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and subject to the penultimate sentence of this Section 27, the Company and the Rights Agent shall, if the Company so directs, supplement or amend any provision of this Agreement without the approval of any holders of certificates representing shares of Common Stock. From and after the Distribution Date

and subject to the penultimate sentence of this Section 27, the Company and the Rights Agent shall, if the Company so directs, supplement or amend this Agreement without the approval of any holders of Rights Certificates in order (i) to cure any ambiguity, (ii) to correct or supplement any provision contained herein which may be defective or inconsistent with any other provisions herein, (iii) to shorten or lengthen any time period hereunder, or (iv) to change or supplement the provisions hereunder in any manner which the Company may deem necessary or desirable and which shall not adversely affect the interests of the holders of Rights Certificates (other than an Acquiring Person or an Affiliate or Associate of an Acquiring Person); provided, this Agreement may not be

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supplemented or amended to lengthen, pursuant to clause (iii) of this sentence, (A) a time period relating to when the Rights may be redeemed at such time as the Rights are not then redeemable, or (B) any other time period unless such lengthening is for the purpose of protecting, enhancing or clarifying the rights of, and/or the benefits to, the holders of Rights. Upon the delivery of a certificate from an appropriate officer of the Company which states that the proposed supplement or amendment is in compliance with the terms of this

Section 27, the Rights Agent shall execute such supplement or amendment. Notwithstanding anything contained in this Agreement to the contrary, no supplement or amendment shall be made which changes the Redemption Price, the Final Expiration Date, the Purchase Price or the number of one one-thousandths of a share of Preferred Stock for which a Right is exercisable. Prior to the Distribution Date, the interests of the holders of Rights shall be deemed coincident with the interests of the holders of Common Stock.

Section 28. Successors. All the covenants and provisions of this ----- Agreement by or for the benefit of the Company or the Rights Agent shall bind and inure to the benefit of their respective successors and assigns hereunder.

Section 29. Determinations and Actions by the Board of Directors, etc. ----- For all purposes of this Agreement, any calculation of the number of shares of Common Stock outstanding at any particular time, including for purposes of determining the particular percentage of such outstanding shares of Common Stock of which any Person is the Beneficial Owner, shall be made in accordance with the last sentence of Rule 13d-3(d)(1)(i) of the General Rules and Regulations under

the Exchange Act. The Board of Directors of the Company shall have the exclusive power and authority to administer this Agreement and to exercise all rights and powers specifically granted to the Board or to the Company, or as may be necessary or advisable in the administration of this Agreement, including, without limitation, the right and power to (i) interpret the provisions of this Agreement, and (ii) make all determinations deemed necessary or advisable for the administration of this Agreement (including a determination to redeem or not redeem the Rights or to amend the Agreement). All such actions, calculations, interpretations and determinations (including, for purposes of clause (y) below, all omissions with respect to the foregoing) which are done or made by the Board in good faith, shall (x) be final, conclusive and binding on the Company, the Rights Agent, the holders of the Rights and all other parties, and (y) not subject the Board to any liability to the holders of the Rights.

Section 30. Benefits of this Agreement. Nothing in this Agreement shall be construed to give to any Person other than the Company, the Rights Agent and the registered holders of the Rights Certificates (and, prior to the Distribution Date, registered holders of the

Common Stock) any legal or equitable right, remedy or claim under this Agreement; but this Agreement shall be for the sole and exclusive benefit of the Company, the Rights Agent and the registered holders of the Rights Certificates (and, prior to the Distribution Date, registered holders of the Common Stock).

Section 31. Severability. If any term, provision, covenant or

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restriction of this Agreement is held by a court of competent jurisdiction or other authority to be invalid, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated; provided, however, that notwithstanding anything in this Agreement to the contrary, if any such term, provision, covenant or restriction is held by such court or authority to be invalid, void or unenforceable and the Board of Directors of the Company determines in its good faith judgment that severing the invalid language from this Agreement would adversely affect the purpose or effect of this Agreement, the right of redemption set forth in Section 23 hereof shall be reinstated and shall not expire until the close of

business on the tenth day following the date of such determination by the Board of Directors.

Section 32. Governing Law. This Agreement, each Right and each Rights

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Certificate issued hereunder shall be deemed to be a contract made under the laws of the State of Pennsylvania and for all purposes shall be governed by and construed in accordance with the laws of such State applicable to contracts made and to be performed entirely within such State.

Section 33. Counterparts. This Agreement may be executed in any number

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of counterparts and each of such counterparts shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same instrument.

Section 34. Descriptive Headings. Descriptive headings of the several Sections of this Agreement are inserted for convenience only and shall not control or affect the meaning or construction of any of the provisions hereof.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and their respective corporate seals to be hereunto affixed and attested, all as of the day and year first above written.

Attest: MINE SAFETY APPLIANCES COMPANY

By /s/ Donald H. Cuozzo  
-----  
Name: Donald H. Cuozzo  
Title: Secretary

By /s/ John T. Ryan III  
-----  
Name: John T. Ryan III  
Title: Chairman and  
Chief Executive  
Officer

Attest: NORWEST BANK MINNESOTA, N.A.

By /s/ Kenneth P. Swanson  
-----  
Name: Kenneth P. Swanson  
Title: Assistant Vice  
President

By /s/ Suzanne M. Swits  
-----  
Name: Suzanne M. Swits  
Title: Assistant Vice  
President

STATEMENT WITH RESPECT TO SHARES  
of  
SERIES A JUNIOR PARTICIPATING PREFERRED STOCK  
of  
MINE SAFETY APPLIANCES COMPANY  
(Pursuant to Section 1522(c) of the  
Pennsylvania Business Corporation Law of 1988)

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In compliance with the requirements of Section 1522(c) of the Pennsylvania Business Corporation Law of 1988 (the "BCL"), Mine Safety Appliances Company, a corporation organized and existing under the BCL (the "Corporation"), hereby certifies that:

1. The name of the Corporation is Mine Safety Appliances Company.

2. The resolution ("Resolution") duly adopted by the Board of Directors of the Corporation establishing and designating a series of the Corporation's Second Cumulative Preferred Stock, par value \$10 per share, and fixing and determining the relative rights and preferences thereof is as follows:

RESOLVED, that pursuant to the authority granted to and vested in the Board of Directors of this Corporation (hereinafter called the "Board of Directors" or the "Board") in accordance with the provisions of the Restated Articles of Incorporation, the Board of Directors hereby creates a series of Second Cumulative Preferred Stock, par value \$10 per share (the "Second Preferred Stock"), of the Corporation and hereby states the designation and number of shares, and fixes the relative rights, preferences, and limitations thereof as follows:

Series A Junior Participating Preferred Stock:

Section 1. Designation and Amount. The shares of such series shall be

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designated as "Series A Junior Participating Preferred Stock" and the number of shares constituting such series shall be 20,000.

Section 2. Dividends and Distributions.  
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(A) The holders of shares of Series A Junior Participating Preferred Stock shall be entitled to receive, when, as and if declared by the Board of Directors out of funds legally available for the purpose, quarterly dividends payable in cash on the last day of March, June, September and December in each year (each such date being referred to herein as a "Quarterly Dividend Payment Date"), commencing on the first Quarterly Dividend Payment Date after the first issuance of a share or fraction of a share of Series A Junior Participating Preferred Stock, in an amount per share (rounded to the nearest cent) equal to the greater of (a) \$0.01 or (b) subject to the provision for adjustment hereinafter set forth, 1,000 times the aggregate per share amount of all cash dividends, and 1,000 times the aggregate per share amount (payable in kind) of all non-cash dividends or other distributions other than a dividend payable in shares of Common Stock or a subdivision of the outstanding shares of Common Stock (by reclassification or otherwise), declared on the Common Stock, par value \$0.01 per share, of the Corporation (the "Common Stock") since the immediately preceding Quarterly Dividend Payment Date, or, with respect to the first Quarterly Dividend Payment Date, since the first issuance of any share or fraction of a share of Series A Junior Participating Preferred Stock. In the event the Corporation shall at any time after February 10, 1997 (the "Rights Declaration Date") (i) declare any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock, or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the amount to which holders of shares of Series A Junior Participating Preferred Stock were entitled immediately prior to such event under clause (b) of the preceding sentence shall be adjusted by multiplying such amount by a fraction the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

(B) The Corporation shall declare a dividend or distribution on the Series A Junior Participating Preferred Stock as provided in Paragraph (A) above immediately after it declares a dividend or distribution on the Common Stock

(other than a dividend payable in shares of Common Stock); provided that, in the event no dividend or distribution shall have been declared on the Common Stock during the period between any Quarterly Dividend Payment Date and the next subsequent Quarterly Dividend Payment Date, a dividend of \$0.01 per share on the Series A Junior Participating Preferred Stock shall nevertheless be payable on such subsequent Quarterly Dividend Payment Date.

(C) Dividends shall begin to accrue and be cumulative on outstanding shares of Series A Junior Participating Preferred Stock from the Quarterly Dividend Payment Date next preceding the date of issue of such shares of Series A Junior Participating Preferred Stock, unless the date of issue of such shares is prior to the record date for the first Quarterly Dividend Payment Date, in which case dividends on such shares shall begin to accrue from the date of issue of such shares, or unless the date of issue is a Quarterly Dividend Payment Date or is a date after the record date for the determination of holders of shares of Series A Junior Participating Preferred Stock entitled to receive a quarterly dividend and before such Quarterly Dividend Payment Date, in either of which events such dividends shall begin to accrue and be cumulative from such Quarterly Dividend Payment Date. Accrued but unpaid dividends shall not bear interest. Dividends paid on the shares of Series A Junior Participating Preferred Stock in an amount less than the total amount of such dividends at the time accrued and payable on such shares shall be allocated pro rata on a share-by-share basis among all such shares at the time outstanding. The Board of Directors may fix a record date for the determination of holders of shares of Series A Junior Participating Preferred Stock entitled to receive payment of a dividend or distribution declared thereon, which record date shall be no more than 30 days prior to the date fixed for the payment thereof.

Section 3. Voting Rights. The holders of shares of Series A Junior  
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Participating Preferred Stock shall have the following voting rights:

(A) Subject to the provision for adjustment hereinafter set forth, each share of Series A Junior Participating Preferred Stock shall entitle the holder thereof to 1,000 votes on all matters submitted to a vote of the stockholders of the Corporation. In the event the Corporation shall at any time after the Rights Declaration Date (i) declare any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock, or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the number of votes per share to which holders of shares of Series A Junior Participating Preferred Stock were entitled immediately prior to such event

shall be adjusted by multiplying such number by a fraction the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

(B) Except as otherwise provided herein or by law, the holders of shares of Series A Junior Participating Preferred Stock and the holders of shares of Common Stock shall vote together as one class on all matters submitted to a vote of stockholders of the Corporation.

(C) If at the time of any annual meeting of shareholders a default in preference dividends on the Second Preferred Stock shall exist, the number of directors constituting the Board of Directors of the Company shall be increased by two, and the holders of the Second Preferred Stock, voting separately as a class without regard to series, shall, to the exclusion of the holders of the 4 1/2% Preferred Stock and the holders of Common Stock, have the right at such meeting to elect two directors of the Company to fill such newly created directorships. Such right shall continue until there are no dividends in arrears upon the Second Preferred Stock. Each director elected by the holders of the Second Preferred Stock, voting as a class as aforesaid (a "Second Preferred Director"), shall continue to serve as such director for the full term for which he shall have been elected, notwithstanding that prior to the end of such term a default in preference dividends shall cease to exist. Any Second Preferred Director may be removed by, and shall not be removed except by, the vote of the holders of record of the outstanding shares of Second Preferred Stock, voting separately as a class without regard to series, at a meeting of the shareholders, or of the holders of shares of Second Preferred Stock, called for the purpose. So long as a default in any preference dividends on the Second Preferred Stock shall exist any vacancy in the office of a Second Preferred Director may be filled either by an instrument in writing signed by the remaining Second Preferred Director and filed with the Company or by the vote of the holders of the outstanding Second Preferred Stock, voting separately as a class without regard to series. Whenever the term of office of the Second Preferred Directors shall end and a default in preference dividends shall no longer exist, the number of directors shall be the number otherwise specified without reference to the provisions of this Section 3. For the purposes of this Section 3, a default in preference dividends on the Second Preferred Stock shall be deemed to have occurred whenever the amount of dividends accrued or in arrears upon any series of the Second Preferred Stock shall be equivalent to six full quarter-yearly (or three full semi-annual) dividends or more, and, having so occurred, such default shall be deemed to exist thereafter until all dividends accrued or in arrears on all shares of Second Preferred Stock then outstanding, of each series, shall have been paid to the end of the last preceding quarterly dividend period.

(D) Except upon the affirmative vote of the holders of at least 60% of the aggregate number of shares of Second Preferred Stock at the time outstanding (in addition to any other vote at the time required by law), the Company shall not in any manner, whether by amendment of the Articles, by sale of all or substantially all the Company's assets or business, by merger or consolidation, or otherwise,

(i) amend, alter or repeal any of the provisions of the Restated Articles of Incorporation so as to affect adversely the relative rights, preferences or powers of the Second Preferred Stock, or

(ii) authorize, or increase the authorized amount of the Second Preferred Stock or any class or series of stock ranking senior to or on a parity with the Second Preferred Stock in the payment of dividends or the preferential distribution of assets;

Provided, however, that no such vote shall be required for any sale of all or substantially all the Company's assets or business or for any merger or consolidation if (x) each holder of shares of Second Preferred Stock immediately prior thereto shall thereafter and in connection therewith continue to hold or shall receive the same number of shares of preferred stock, with the same relative rights, preferences and powers, of such acquiring, surviving or resulting corporation, and (y) the authorized capital stock of the acquiring, surviving or resulting corporation immediately thereafter shall include only classes of stock for which no such vote would have been required for the authorization thereof under clauses (i) and (ii) above; and provided further, however, that no such vote shall be required under the provisions of Paragraph (D) of this Section 3 if, at or prior to the time when the act with respect to which such vote would otherwise be required shall be effected, provision is made in accordance with the Restated Articles of Incorporation for the redemption of all shares of Second Preferred Stock at the time outstanding.

(E) Except as set forth herein, holders of Series A Junior Participating Preferred Stock shall have no special voting rights and their consent shall not be required (except to the extent they are entitled to vote with holders of Common Stock as set forth herein) for taking any corporate action.

Section 4. Certain Restrictions.  
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(A) Whenever quarterly dividends or other dividends or distributions payable on the Series A Junior Participating Preferred Stock as provided in Section 2 are in arrears, thereafter and until all accrued and unpaid dividends and

distributions, whether or not declared, on shares of Series A Junior Participating Preferred Stock outstanding shall have been paid in full, the Corporation shall not

(i) declare or pay dividends on, make any other distributions on, or redeem or purchase or otherwise acquire for consideration any shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Junior Participating Preferred Stock;

(ii) declare or pay dividends on or make any other distributions on any shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Junior Participating Preferred Stock, except dividends paid ratably on the Series A Junior Participating Preferred Stock and all such parity stock on which dividends are payable or in arrears in proportion to the total amounts to which the holders of all such shares are then entitled;

(iii) redeem or purchase or otherwise acquire for consideration shares of any stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Junior Participating Preferred Stock, provided that the Corporation may at any time redeem, purchase or otherwise acquire shares of any such parity stock in exchange for shares of any stock of the Corporation ranking junior (either as to dividends or upon dissolution, liquidation or winding up) to the Series A Junior Participating Preferred Stock; or

(iv) purchase or otherwise acquire for consideration any shares of Series A Junior Participating Preferred Stock, or any shares of stock ranking on a parity with the Series A Junior Participating Preferred Stock, except in accordance with a purchase offer made in writing or by publication (as determined by the Board of Directors) to all holders of such shares upon such terms as the Board of Directors, after consideration of the respective annual dividend rates and other relative rights and preferences of the respective series and classes, shall determine in good faith will result in fair and equitable treatment among the respective series or classes.

(B) The Corporation shall not permit any subsidiary of the Corporation to purchase or otherwise acquire for consideration any shares of

stock of the Corporation unless the Corporation could, under Paragraph (A) of this Section 4, purchase or otherwise acquire such shares at such time and in such manner.

Section 5. Reacquired Shares. Any shares of Series A Junior

Participating Preferred Stock purchased or otherwise acquired by the Corporation in any manner whatsoever shall be retired and cancelled promptly after the acquisition thereof. All such shares shall upon their cancellation become authorized but unissued shares of Preferred Stock and may be reissued as part of a new series of Preferred Stock to be created by resolution or resolutions of the Board of Directors, subject to the conditions and restrictions on issuance set forth herein.

Section 6. Liquidation, Dissolution or Winding Up. (A) Upon any

liquidation (voluntary or otherwise), dissolution or winding up of the Corporation, no distribution shall be made to the holders of shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Junior Participating Preferred Stock unless, prior thereto, the holders of shares of Series A Junior Participating Preferred Stock shall have received an amount equal to 1,000 times the Exercise Price, plus an amount equal to accrued and unpaid dividends and distributions thereon, whether or not declared, to the date of such payment (the "Series A Liquidation Preference"). Following the payment of the full amount of the Series A Liquidation Preference, no additional distributions shall be made to the holders of shares of Series A Junior Participating Preferred Stock unless, prior thereto, the holders of shares of Common Stock shall have received an amount per share (the "Common Adjustment") equal to the quotient obtained by dividing (i) the Series A Liquidation Preference by (ii) 1,000 (as appropriately adjusted as set forth in subparagraph (C) below to reflect such events as stock splits, stock dividends and recapitalizations with respect to the Common Stock) (such number in clause (ii), the "Adjustment Number"). Following the payment of the full amount of the Series A Liquidation Preference and the Common Adjustment in respect of all outstanding shares of Series A Junior Participating Preferred Stock and Common Stock, respectively, holders of Series A Junior Participating Preferred Stock and holders of shares of Common Stock shall receive their ratable and proportionate share of the remaining assets to be distributed in the ratio of the Adjustment Number to 1 with respect to such Preferred Stock and Common Stock, on a per share basis, respectively.

(C) In the event, however, that there are not sufficient assets available to permit payment in full of the Series A Liquidation Preference and the liquidation preferences of all other series of preferred stock, if any, which rank on a parity with the Series A Junior Participating Preferred Stock, then such remaining assets shall be distributed ratably to the holders of such parity shares in

proportion to their respective liquidation preferences. In the event, however, that there are not sufficient assets available to permit payment in full of the Common Adjustment, then such remaining assets shall be distributed ratably to the holders of Common Stock.

(D) In the event the Corporation shall at any time after the Rights Declaration Date (i) declare any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock, or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the Adjustment Number in effect immediately prior to such event shall be adjusted by multiplying such Adjustment Number by a fraction the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

Section 7. Consolidation, Merger, etc. In case the Corporation shall  
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enter into any consolidation, merger, combination or other transaction in which the shares of Common Stock are exchanged for or changed into other stock or securities, cash and/or any other property, then in any such case the shares of Series A Junior Participating Preferred Stock shall at the same time be similarly exchanged or changed in an amount per share (subject to the provision for adjustment hereinafter set forth) equal to 1,000 times the aggregate amount of stock, securities, cash and/or any other property (payable in kind), as the case may be, into which or for which each share of Common Stock is changed or exchanged. In the event the Corporation shall at any time after the Rights Declaration Date (i) declare any dividend on Common Stock payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock, or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the amount set forth in the preceding sentence with respect to the exchange or change of shares of Series A Junior Participating Preferred Stock shall be adjusted by multiplying such amount by a fraction the numerator of which is the number of shares of Common Stock outstanding immediately after such event and the denominator of which is the number of shares of Common Stock that were outstanding immediately prior to such event.

Section 8. No Redemption. The shares of Series A Junior Participating  
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Preferred Stock shall not be redeemable.

Section 9. Ranking. The Series A Junior Preferred Stock shall rank  
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junior to all other series of the Corporation's Preferred Stock as to the payment of dividends and the distribution of assets, unless the terms of any such series shall provide otherwise.

Section 10. Amendment. The Restated Articles of Incorporation, of the

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Corporation shall not be further amended in any manner which would materially alter or change the powers, preferences or special rights of the Series A Junior Participating Preferred Stock so as to affect them adversely without the affirmative vote of the holders of a majority or more of the outstanding shares of Series A Junior Participating Preferred Stock, voting separately as a class.

Section 11. Fractional Shares. Series A Junior Participating Preferred

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Stock may be issued in fractions of a share which shall entitle the holder, in proportion to such holders fractional shares, to exercise voting rights, receive dividends, participate in distributions and to have the benefit of all other rights of holders of Series A Junior Participating Preferred Stock.

Section 12. The aggregate number of shares of the Series A Preferred Stock established and designated by the Resolution is 20,000; (ii) the Corporation has previously established and designated the 4 1/2% Cumulative Preferred; and (iii) the aggregate number of shares established and designated by the Restated Articles of Incorporation of the Corporation is 21,100,000, of which 100,000 are shares of 4 1/2% Cumulative Preferred Stock, par value \$50 per share, 1,000,000 are shares of Second Cumulative Preferred Stock, par value \$10 per share, issuable in one or more series, and 20,000,000 shares are Common Stock, no par value.

Section 13. The resolution was duly adopted by the Board of Directors of the Corporation by a Consent in Lieu of Meeting signed by all directors effective on February 10, 1997.

IN WITNESS WHEREOF, this Statement With Respect to Shares is executed on behalf of the Corporation by its President and Chief Executive Officer and attested by its Secretary this day of February, 1997.

[Corporate Seal]

-----  
John T. Ryan, III, Chairman and  
Chief Executive Officer

Attest:

-----  
Donald H. Cuozzo, Secretary

[Form of Rights Certificate]

Certificate No. R-

Rights  
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NOT EXERCISABLE AFTER FEBRUARY 21, 2007 OR EARLIER IF REDEEMED BY THE COMPANY. THE RIGHTS ARE SUBJECT TO REDEMPTION, AT THE OPTION OF THE COMPANY, AT \$0.01 PER RIGHT ON THE TERMS SET FORTH IN THE RIGHTS AGREEMENT. UNDER CERTAIN CIRCUMSTANCES, RIGHTS BENEFICIALLY OWNED BY AN ACQUIRING PERSON (AS SUCH TERM IS DEFINED IN THE RIGHTS AGREEMENT) AND ANY SUBSEQUENT HOLDER OF SUCH RIGHTS MAY BECOME NULL AND VOID. [THE RIGHTS REPRESENTED BY THIS RIGHTS CERTIFICATE ARE OR WERE BENEFICIALLY OWNED BY A PERSON WHO WAS OR BECAME AN ACQUIRING PERSON OR AN AFFILIATE OR ASSOCIATE OF AN ACQUIRING PERSON (AS SUCH TERMS ARE DEFINED IN THE RIGHTS AGREEMENT). ACCORDINGLY, THIS RIGHTS CERTIFICATE AND THE RIGHTS REPRESENTED HEREBY MAY BECOME NULL AND VOID IN THE CIRCUMSTANCES SPECIFIED IN SECTION 7(e) OF SUCH AGREEMENT.]/(1)/

Rights Certificate

MINE SAFETY APPLIANCES COMPANY

This certifies that , \_\_\_\_\_ , or registered assigns, is the registered owner of the number of Rights set forth above, each of which entitles the owner thereof, subject to the terms, provisions and conditions of the Rights Agreement, dated as of February 10, 1997 (the "Rights Agreement"), between Mine Safety Appliances Company, a Pennsylvania corporation (the "Company"), and Norwest Bank Minnesota, N.A., a national banking association (the "Rights Agent"), to purchase

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/1/ The portion of the legend in brackets shall be inserted only if applicable and shall replace the preceding sentence.

from the Company at any time prior to 5:00 P.M. (Central time) on February 21, 2007 at the office or offices of the Rights Agent designated for such purpose, or its successors as Rights Agent, one one-thousandth of a fully paid, non-assessable share of Series A Junior Participating Preferred Stock (the "Preferred Stock") of the Company, at a purchase price of \$225 per one one-thousandth of a share (the "Purchase Price"), upon presentation and surrender of this Rights Certificate with the Form of Election to Purchase and related Certificate duly executed. The number of Rights evidenced by this Rights Certificate (and the number of shares which may be purchased upon exercise thereof) set forth above, and the Purchase Price per share set forth above, are the number and Purchase Price as of February 21, 1997 based on the Preferred Stock as constituted at such date. The Company reserves the right to require prior to the occurrence of a Triggering Event (as such term is defined in the Rights Agreement) that a number of Rights be exercised so that only whole shares of Preferred Stock will be issued.

Upon the occurrence of a Section 11(a)(ii) Event (as such term is defined in the Rights Agreement), if the Rights evidenced by this Rights Certificate are beneficially owned by (i) an Acquiring Person or an Affiliate or Associate of any such Acquiring Person (as such terms are defined in the Rights Agreement), (ii) a transferee of any such Acquiring Person, Associate or Affiliate, or (iii) under certain circumstances specified in the Rights Agreement, a transferee of a person who, after such transfer, became an Acquiring Person, or an Affiliate or Associate of an Acquiring Person, such Rights shall become null and void and no holder hereof shall have any right with respect to such Rights from and after the occurrence of such Section 11(a)(ii) Event.

As provided in the Rights Agreement, the Purchase Price and the number and kind of shares of Preferred Stock or other securities, which may be purchased upon the exercise of the Rights evidenced by this Rights Certificate are subject to modification and adjustment upon the happening of certain events, including Triggering Events.

This Rights Certificate is subject to all of the terms, provisions and conditions of the Rights Agreement, which terms, provisions and conditions are hereby incorporated herein by reference and made a part hereof and to which Rights Agreement reference is hereby made for a full description of the rights, limitations of rights, obligations, duties and immunities hereunder of the Rights

Agent, the Company and the holders of the Rights Certificates, which limitations of rights include the temporary suspension of the exercisability of such Rights under the specific circumstances set forth in the Rights Agreement. Copies of the Rights Agreement are on file at the above-mentioned office of the Rights Agent and are also available upon written request to the Rights Agent.

This Rights Certificate, with or without other Rights Certificates, upon surrender at the principal office or offices of the Rights Agent designated for such purpose, may be exchanged for another Rights Certificate or Rights Certificates of like tenor and date evidencing Rights entitling the holder to purchase a like aggregate number of one one-thousandths of a share of Preferred Stock as the Rights evidenced by the Rights Certificate or Rights Certificates surrendered shall have entitled such holder to purchase. If this Rights Certificate shall be exercised in part, the holder shall be entitled to receive upon surrender hereof another Rights Certificate or Rights Certificates for the number of whole Rights not exercised.

Subject to the provisions of the Rights Agreement, the Rights evidenced by this Certificate may be redeemed by the Company at its option at a redemption price of \$0.01 per Right at any time prior to the earlier of the close of business on (i) the tenth day following the Stock Acquisition Date (as such time period may be extended pursuant to the Rights Agreement), and (ii) the Final Expiration Date. In addition, the Rights may be exchanged, in whole or in part, for shares of the Common Stock, or shares of preferred stock of the Company having essentially the same value or economic rights as such shares. Immediately upon the action of the Board of Directors of the Company authorizing any such exchange, and without any further action or any notice, the Rights (other than Rights which are not subject to such exchange) will terminate and the Rights will only enable holders to receive the shares issuable upon such exchange.

No fractional shares of Preferred Stock will be issued upon the exercise of any Right or Rights evidenced hereby (other than fractions which are integral multiples of one one-thousandth of a share of Preferred Stock, which may, at the election of the Company, be evidenced by depositary receipts), but in lieu thereof a cash

payment will be made, as provided in the Rights Agreement.

No holder of this Rights Certificate shall be entitled to vote or receive dividends or be deemed for any purpose the holder of shares of Preferred Stock or of any other securities of the Company which may at any time be issuable on the exercise hereof, nor shall anything contained in the Rights Agreement or herein be construed to confer upon the holder hereof, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action, or, to receive notice of meetings or other actions affecting stockholders (except as provided in the Rights Agreement), or to receive dividends or subscription rights, or otherwise, until the Right or Rights evidenced by this Rights Certificate shall have been exercised as provided in the Rights Agreement.

This Rights Certificate shall not be valid or obligatory for any purpose until it shall have been countersigned by the Rights Agent.

WITNESS the facsimile signature of the proper officers of the Company and its corporate seal.

Dated as of \_\_\_\_\_, \_\_\_\_\_

ATTEST: MINE SAFETY APPLIANCES COMPANY

\_ Attest: MINE SAFETY APPLIANCES COMPANY

-----  
Secretary By -----  
Title:

Countersigned:

NORWEST BANK MINNESOTA, N.A.

By -----  
Authorized Signature

[Form of Reverse Side of Rights Certificate]

FORM OF ASSIGNMENT  
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(To be executed by the registered holder if such holder desires to transfer the Rights Certificate.)

FOR VALUE RECEIVED

-----  
hereby sells, assigns and transfer unto -----

-----  
(Please print name and address of transferee)

this Rights Certificate, together with all right, title and interest therein, and does hereby irrevocably constitute and appoint ----- Attorney,

-----  
to transfer the within Rights Certificate on the books of the within-named Company, with full power of substitution.

Dated: -----, 19 --

-----  
Signature

Signature Guaranteed:

Certificate  
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The undersigned hereby certifies by checking the appropriate boxes that:

(1) this Rights Certificate [ ] is [ ] is not being sold, assigned and transferred by or on behalf of a Person who is or was an Acquiring Person or an Affiliate or Associate of any such Acquiring Person (as such terms are defined pursuant to the Rights Agreement);

(2) after due inquiry and to the best knowledge of the undersigned, it [ ] did [ ] did not acquire the Rights evidenced by this Rights Certificate from any Person who is, was or subsequently became an Acquiring Person or an Affiliate or Associate of an Acquiring Person.

Dated: -----, 19 --

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Signature

Signature Guaranteed:

NOTICE  
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The signature to the foregoing Assignment and Certificate must correspond to the name as written upon the face of this Rights Certificate in every particular, without alteration or enlargement or any change whatsoever.

FORM OF ELECTION TO PURCHASE

(To be executed if holder desires to exercise Rights represented by the the Rights Certificate.)

To: MINE SAFETY APPLIANCES COMPANY:

The undersigned hereby irrevocably elects to exercise Rights represented by this Rights Certificate to purchase the shares of Preferred Stock issuable upon the exercise of the Rights (or such other securities of the Company or of any other person which may be issuable upon the exercise of the Rights) and requests that certificates for such shares be issued in the name of and delivered to:

Please insert social security or other identifying number

(Please print name and address)

If such number of Rights shall not be all the Rights evidenced by this Rights Certificate, a new Rights Certificate for the balance of such Rights shall be registered in the name of and delivered to:

Please insert social security or other identifying number

(Please print name and address)

Dated: , 19

Signature

Signature Guaranteed:

Certificate

The undersigned hereby certifies by checking the appropriate boxes that:

(1) the Rights evidenced by this Rights Certificate [ ] are [ ] are not being exercised by or on behalf of a Person who is or was an Acquiring Person or an Affiliate or Associate of any such Acquiring Person (as such terms are defined pursuant to the Rights Agreement);

(2) after due inquiry and to the best knowledge of the undersigned, it  
[ ] did [ ] did not acquire the Rights evidenced by this Rights Certificate from  
any Person who is, was or became an Acquiring Person or an Affiliate or  
Associate of an Acquiring Person.

Dated: \_\_\_\_\_, 19  
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Signature

Signature Guaranteed:

NOTICE  
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The signature to the foregoing Election to Purchase and Certificate  
must correspond to the name as written upon the face of this Rights Certificate  
in every particular, without alteration or enlargement or any change whatsoever.

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DETAILED SUMMARY OF RIGHTS TO PURCHASE  
SERIES A JUNIOR PARTICIPATING PREFERRED STOCK

On February 10, 1997, the Board of Directors of Mine Safety Appliances Company (the "Company") adopted a Shareholder Rights Plan, providing that one Right shall be attached to each share of Common Stock of the Company. Each Right entitles the registered holder to purchase from the Company one one-thousandth of a share of Series A Junior Participating Preferred Stock (the "Preferred Stock"), at a purchase price (the "Purchase Price") of \$225 per one one-thousandth of a share of Preferred Stock, subject to adjustment. The description and terms of the Rights are set forth in the Rights Agreement (the "Rights Agreement"), dated as of February 10, 1997, between the Company and Norwest Bank Minnesota, N.A., a national banking association, as Rights Agent (the "Rights Agent").

Initially, the Rights will be attached to all Common Stock certificates representing shares then outstanding, and no separate Rights Certificate will be distributed. The Rights will separate from the Common Stock upon the earlier of (i) 10 days following a public announcement that a person or group of affiliated or associated persons (an "Acquiring Person") has acquired, or has obtained the right to acquire, beneficial ownership, after excluding "Exempted Shares," of 15% or more of the outstanding shares of Common Stock (the "Stock Acquisition Date") or (ii) ten business days following the commencement of a tender offer or exchange offer that would result in a person or group beneficially owning 15% or more of the outstanding shares of Common Stock without excluding any "Exempted Shares" beneficially owned by the Acquiring Person (the earlier of (i) and (ii), the "Distribution Date"). The definition of "Exempted Shares" excludes Common Stock beneficially owned as of February 10, 1997. Until the Distribution Date, (i) the Rights will be evidenced by the Common Stock certificates and will be transferred with and only with such Common Stock certificates, (ii) new Common Stock certificates will contain a notation incorporating the Rights Agreement by reference and (iii) the surrender for transfer of any certificates for Common Stock outstanding will also constitute the

transfer of the Rights associated with the Common Stock represented by such certificate.

The Rights are not exercisable until the Distribution Date and will expire at the close of business on February 21, 2007 unless earlier redeemed by the Company as described below. At no time will the Rights have any voting power.

As soon as practicable after the Distribution Date, Rights Certificates will be mailed to holders of record of the Common Stock as of the close of business on the Distribution Date and, thereafter, the separate Rights Certificates alone will represent the Rights. Except as otherwise determined by the Board of Directors, only shares of Common Stock issued prior to the Distribution Date will be issued with Rights.

In the event that an Acquiring Person becomes the beneficial owner, after excluding "Exempted Shares," of 15% or more of the then outstanding shares of Common Stock (unless such acquisition is made pursuant to a tender or exchange offer for all outstanding shares of the Company, at a price determined by a majority of the independent directors of the Company who are not representatives, nominees, Affiliates or Associates of an Acquiring Person to be fair and otherwise in the best interest of the Company and its stockholders after receiving advice from one or more investment banking firms (a "Qualifying Offer"), each holder of a Right will thereafter have the right to receive, upon exercise, Common Stock (or, in certain circumstances, cash, property or other securities of the Company), having a value equal to two times the Exercise Price of the Right. The Exercise Price is the Purchase Price times the number of shares of Common Stock associated with each Right (initially, one). Notwithstanding any of the foregoing, following the occurrence of any of the events set forth in this paragraph (the "Flipin Events"), all Rights that are, or (under certain circumstances specified in the Rights Agreement) were, beneficially owned by any Acquiring Person will be null and void. However, Rights are not exercisable following the occurrence of any of the Flipin Events set forth above until such time as the Rights are no longer redeemable by the Company as set forth below.

In the event that following the Stock Acquisition Date, (i) the Company engages in a merger or business combination transaction in which the Company is not the surviving corporation (other than a merger consummated

pursuant to a Qualifying Offer); (ii) the Company engages in a merger or business combination transaction in which the Company is the surviving corporation and the Common Stock of the Company is changed or exchanged; or (iii) more than 50% of the Company's assets or earning power is sold or transferred, each holder of a Right (except Rights which have previously been voided as set forth above) shall thereafter have the right to receive, upon exercise of the Right, Common Stock of the acquiring company having a value equal to two times the Exercise Price of the Right.

The Purchase Price payable, and the number of Units of Preferred Stock or other securities or property issuable upon exercise of the Rights are subject to adjustment from time to time to prevent dilution (i) in the event of a stock dividend on, or a subdivision, combination or reclassification of, the Preferred Stock, (ii) if holders of the Preferred Stock are granted certain rights or warrants to subscribe for Preferred Stock or convertible securities at less than the current market price of the Preferred Stock, or (iii) upon the distribution to holders of the Preferred Stock of evidences of indebtedness or assets (excluding regular quarterly cash dividends) or of subscription rights or warrants (other than those referred to above).

With certain exceptions, no adjustments in the Purchase Price will be required until cumulative adjustments amount to at least 1% of the Purchase Price. No fractional Units will be issued and, in lieu thereof, an adjustment in cash will be made based on the market price of the Preferred Stock on the last trading date prior to the date of exercise.

At any time after a person becomes an Acquiring Person and prior to the acquisition by such person or group of fifty percent (50%) or more of the outstanding Common Stock, the Board may exchange the Rights (other than Rights owned by such person or group which have become void), in whole or in part, at an exchange ratio of one share of Common Stock, or one one-thousandth of a share of Preferred Stock (or of a share of a class or series of the Company's preferred stock having equivalent rights, preferences and privileges), per Right (subject to adjustment).

At any time until ten days following the Stock Acquisition Date, the Company may redeem the Rights in whole, but not in part, at a price of \$0.01 per Right.

Under certain circumstances, the decision to redeem shall require the concurrence of a majority of the Continuing Directors (as defined below). Immediately upon the action of the Board of Directors ordering redemption of the Rights, the Rights will terminate and the only right of the holders of Rights will be to receive the \$0.01 redemption price.

Until a Right is exercised, the holder thereof, as such, will have no rights as a stockholder of the Company, including, without limitation, the right to vote or to receive dividends. While the distribution of the Rights will not be taxable to stockholders or to the Company, stockholders may, depending upon the circumstances, recognize taxable income in the event that the Rights become exercisable for Common Stock (or other consideration) of the Company as set forth above or in the event that the Rights are redeemed.

Other than those provisions relating to the principal economic terms of the Rights, any of the provisions of the Rights Agreement may be amended by the Board of Directors of the Company prior to the Distribution Date. After the Distribution Date, the provisions of the Rights Agreement may be amended by the Board (in certain circumstances, with the concurrence of the Continuing Directors) in order to cure any ambiguity, to make changes which do not adversely affect the interests of holders of Rights (excluding the interest of any Acquiring Person), or to shorten or lengthen any time period under the Rights Agreement; provided, however, that no amendment to adjust the time period governing redemption shall be made at such time as the Rights are not redeemable.

A copy of the Rights Agreement is being filed with the Securities and Exchange Commission as an Exhibit to a Registration Statement on Form 8-A. A copy of the Rights Agreement is available free of charge from the Company. This Summary Description of the Rights does not purport to be complete and is qualified in its entirety by reference to the Rights Agreement, which is incorporated herein by reference.

## Forward-Looking Statements

The following discussion should be read in conjunction with the consolidated financial statements contained in this Annual Report to Shareholders. Certain statements contained in this discussion and elsewhere in this report may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements involve a number of risks, uncertainties and other factors that could cause actual results to differ materially from expectations contained in such statements.

Factors that may materially affect financial condition and future results include: global economic conditions; the threat of terrorism and its potential consequences; the timely and successful introduction of new products; the availability of funding in the fire service market; the ability of third-party suppliers to provide key materials and components; market conditions affecting specialty chemical customers; liquidity; and interest and currency exchange rates.

## Critical Accounting Policies and Estimates

MSA prepares its consolidated financial statements in accordance with accounting principles generally accepted in the United States of America. The preparation of these consolidated financial statements requires MSA to make estimates and judgements that affect the reported amounts of assets, liabilities, revenues and expenses, and the related disclosures. MSA bases its estimates and judgements on historical experience and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgements about the carrying values of assets and liabilities that are not readily apparent from other sources. MSA evaluates these estimates and judgements on an ongoing basis. Actual results may differ from these estimates and judgements.

MSA believes the following critical accounting policies affect its more significant estimates and judgements used in the preparation of the consolidated financial statements. MSA records estimated reductions to sales for customer programs including volume-based incentives. If market conditions were to change, the amounts due to customers under these programs could differ from the recorded estimates. MSA maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. If the financial condition of MSA's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances could be required. MSA provides for the estimated cost of product warranties at the time that sales are recognized. While MSA has extensive product quality programs and processes, the company's warranty obligation is affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. Should actual product failure rates, material usage or service delivery costs differ from MSA's estimates, revisions to the estimated warranty liability would be required. MSA writes down its inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of the inventory and the estimated market value based on assumptions about future demand and market conditions. If actual market conditions were less favorable than those projected by management, additional inventory write-downs could be required. MSA records a valuation allowance to reduce its deferred tax assets to the amount that is estimated to be realized. While MSA has considered future taxable income and prudent tax planning strategies in assessing the need for the valuation allowance, if MSA were to determine that it would be able to realize its deferred tax assets in excess of its net recorded amount, an adjustment to the deferred tax asset would increase net income in the period that such a determination was made. Conversely, if MSA were to determine that it would not be able to realize all or part of its net deferred tax asset in the future, an adjustment to the deferred tax asset would be charged to income in the period that such a determination was made. Actuarial assumptions have a significant impact on the determination of net periodic pension costs and credits. If actual experience differs from these assumptions, future net periodic pension costs and credits could be adversely affected.

Significant accounting policies are stated in italics in the applicable notes to the consolidated financial statements.

## Results of Operations

Corporate initiatives - MSA's performance in 2001 is the result of a number of ongoing initiatives intended to improve competitive position and profitability through the development of new products, targeted acquisitions in focused product and geographic markets, and continuing cost reduction programs. These efforts are expected to continue in 2002 and beyond.

MSA's financial performance in 2001 benefited from the addition during 2000 of two key product offerings to the fire service - the Evolution series of thermal imaging cameras and the CairnsHELMETS line of firefighter head protection. Since the mid-1990s, MSA has recognized the dramatic market potential of thermal imaging camera technology in protecting lives and assisting firefighters in the line of duty. The August 2000 acquisition of CairnsHELMETS added the best known and respected supplier of firefighter head protection in North America to MSA's already strong product offerings to the fire service.

In February 2001, MSA acquired Surety Manufacturing and Testing, Ltd. of Canada, a leading provider of fall protection equipment and rescue systems to railway, construction, and utility markets. The acquisition complements the existing line of MSA Rose fall protection products and services. In addition, the Surety line of rescue systems further enhances MSA product offerings to the fire service market.

On December 20, 2001, MSA reached agreement to acquire CGF Gallet of France, the leading European manufacturer of protective helmets for the fire service, as well as head protection for the police and military. The acquisition is expected to be completed during the first half of 2002. Gallet will continue to operate from its current location near Lyon, France.

Also in Europe, the company continues to make organizational changes that are expected to improve profitability by reducing operating costs, improving manufacturing efficiencies, and providing an integrated marketing and distribution approach. Significant ongoing European reorganization efforts include more centralized customer service, product line management, and inventory planning and control. Country-specific reorganization, including workforce reductions and the sale of excess facilities, is also underway at several European locations.

Making it easy for customers to do business with us has always been a priority at MSA. Key changes in U.S. operations in recent years which demonstrate this commitment to outstanding customer service include the introduction of the MSA Pinnacle Program and the move to centralized customer service. The MSA Pinnacle Program is an innovative distributor incentive program that rewards our distributor partners for achieving specific sales goals and providing more services to customers. Our award-winning Pittsburgh based customer service center gives customers in the U.S. and Canada a knowledgeable and responsive one-stop-shopping approach to doing business with MSA. To further enhance our interface with our distributor partners, MSA added new e-business capabilities in 2001. Through our new ePartner Web site, our distributor partners in North America can now access the MSA product catalog, check product availability, view order and account status, configure assemble-to-order products and enter orders.

2001 versus 2000 - Sales for 2001 were \$542.9 million, an increase of \$42.5 million, or 8%, from \$500.4 million in 2000. Local currency sales growth of 12% was offset by negative exchange rate movements when stated in U.S. dollars.

Sales by North American operations were \$376.8 million in 2001, an increase of \$49.0 million, or 15%, from \$327.8 million in 2000. Approximately half of the sales increase was related to shipments of self-contained breathing apparatus, thermal imaging cameras and fire helmets to the fire service market. Gas mask and respirator sales increased throughout the year, but spiked late in the year in response to the September 11 disasters. Rescue and recovery efforts and heightened emphasis on domestic preparedness and homeland security have increased current demand for these products. Sales of fall protection equipment also grew in 2001, primarily due to the acquisition of Surety Manufacturing and Testing, Ltd. during the first quarter. Instrument sales were also higher during 2001, particularly in permanent instruments, reflecting market acceptance of the Ultima and other new products. Specialty chemical sales in 2001 remained at the 2000 level. Specialty chemical sales levels are highly dependent on the performance of a limited number of pharmaceutical company customers.

Sales by European operations were \$94.2 million in 2001, a decrease of \$4.9 million, or 5%, from \$99.1 million in 2000. The negative currency translation effects of a strong U.S. dollar accounted for approximately \$4.0 million of this decrease. Higher local currency sales in most European markets were offset by lower sales in Sweden and Switzerland, where distribution businesses were divested during 2001.

Sales by MSA's other international operations were \$71.7 million in 2001 compared to \$73.2 million in 2000, a decrease of \$1.5 million, or 2%. Local currency sales growth of approximately 12% was offset by unfavorable currency translation effects when stated in U.S. dollars. Substantial local currency sales growth was achieved in Brazil.

Gross profit for 2001 was \$217.2 million, an increase of \$30.1 million, or 16%, from \$187.1 million in 2000. The ratio of gross profit to sales was 40.0% in 2001 compared to 37.4% in 2000. The improved gross profit percentage accounts for approximately half of the increase in gross profit dollars. The higher gross profit percentage reflects improvements in production efficiency and inventory management in North America and Europe.

Research and development expenses in 2001 were \$18.2 million, an increase of \$1.0 million, or 6%, from \$17.2 million in 2000. These expenses relate primarily to safety and health equipment research and development activities in the U.S. and Germany.

Depreciation, selling and administrative expenses increased \$8.6 million to \$157.6 million in 2001, but decreased as a percent of sales to 29.0% in 2001 compared to 29.8% in 2000. The increase in depreciation, selling and administrative expenses occurred in North America and reflects costs associated with higher sales volumes and a full year's amortization of goodwill related to mid-2000 acquisitions. Depreciation, selling and administrative expenses at international operations were generally flat year-to-year.

Cost of products sold and selling, general and administrative expenses include net periodic pension benefit costs and credits. As described in note 12, pension credits, combined with pension costs, resulted in net pension credits of \$15.0 million in 2001 and \$14.9 million in 2000. Net pension credits in 2000 included credits of \$2.4 million related to settlement and curtailment gains in Canada and Britain. The current recognition of pension income is primarily the result of the exceptional investment performance of the U.S. pension fund over the past ten years. During that period, the investment performance of the MSA Noncontributory Pension Fund ranked among the top 5% of all U.S. pension funds. Future net pension credits can be volatile depending on the future performance of plan assets, changes in actuarial assumptions regarding such factors as the selection of discount rates and rates of return on plan assets, changes in the amortization levels of actuarial gains and losses, plan amendments affecting benefit pay-out levels, and profile changes in the participant populations being valued. Changes in any of these factors could cause net pension credits to change. To the extent net pension credits decline in the future, income would be adversely affected.

Interest expense in 2001 was \$6.1 million compared to \$4.5 million in 2000. The increase relates to a full year's interest expense on additional borrowings made during 2000 to finance acquisitions and common share repurchases by the company.

Currency exchange losses of \$1.2 million were incurred in 2001 compared to a gain of \$444,000 in 2000. The unfavorable swing was primarily related to the strengthening of the U.S. dollar against the Canadian dollar. The most significant gains from currency valuation changes in 2000 occurred in Mexico.

Restructuring charges in 2001 were \$2.3 million compared to \$2.4 million in 2000. The charges in 2001 relate primarily to a plant closing in the U.S. and severance costs associated with workforce reductions in Europe. The 2000 charges were principally for severance costs in Britain, Germany and Canada.

Other income, for which further information is included in note 4, was \$2.8 million in 2001 compared to \$2.5 million in 2000.

The effective income tax rate, for which further information is included in note 8, was 40.2% in 2001 and 31.8% in 2000. The effective rate in 2001 was higher than the U.S. statutory income tax rate primarily due to the recognition of a valuation allowance on deferred tax assets related to foreign tax credit carry-forwards in the U.S. and improved earnings in high tax rate countries. The lower rate in 2000 was primarily due to operating losses in Germany and adjustments to prior year foreign sales corporation tax benefits in the U.S.

Net income for 2001 was \$31.6 million, an increase of \$8.4 million, or 36%, over 2000 net income of \$23.2 million. Basic earnings per share of common stock improved to \$2.65 in 2001 compared to \$1.89 in 2000.

2000 versus 1999 - Sales for 2000 were \$500.4 million, an increase of \$2.5 million, or less than 1%, from \$497.9 million in 1999. Local currency sales growth of 5% was offset by negative exchange rate movements when stated in U.S. dollars.

Sales by North American operations were \$327.8 million in 2000, an increase of \$12.7 million, or 4%, from \$315.1 million in 1999. Higher sales in 2000 reflect new product offerings and strong shipments of core safety products to the fire service, industrial and construction markets. Shipments of self-contained breathing apparatus for firefighters, gas masks for defense preparedness, and helmets for industrial and construction worker head protection all improved significantly during the year. Sales were also strengthened by the third quarter 2000 introductions of the Evolution series of thermal imaging cameras and the CairnsHELMETS line of firefighter head protection. Higher portable instrument sales in 2000 reflect the late-1999 introduction of the improved Passport FiveStar Alarm multigas detector. Specialty chemical sales in 2000 were 8% lower than in the prior year. Specialty chemical sales levels are highly dependent on the performance of a limited number of pharmaceutical company customers.

Sales by European operations were \$99.1 million in 2000, a decrease of \$14.3 million, or 13%, from \$113.4 million in 1999. Local currency sales in Europe were flat year-to-year. Sales growth in Eastern European markets was offset by mixed, but somewhat lower, sales in Western Europe.

Sales by MSA's other international operations were \$73.2 million in 2000 compared to \$68.0 million in 1999, an increase of \$5.2 million, or 8%. A 14% improvement in local currency sales was partially offset by unfavorable currency translation effects when stated in U.S. dollars. Sales growth in South America was particularly strong on improved economic conditions in the region. Notable growth also occurred in Africa and China reflecting expanding operations in those areas.

Gross profit for 2000 was \$187.1 million, an increase of \$7.4 million, or 4%, from \$179.7 million in 1999. An increase in the ratio of gross profit to sales to 37.4% in 2000 from 36.1% in 1999 is the primary reason for higher gross profit in 2000. Higher sales account for approximately \$1.0 million of the gross profit improvement.

Research and development expenses were largely unchanged in 2000 at \$17.2 million, compared to \$17.1 million in 1999. These expenses relate primarily to safety and health equipment research and development activities in the U.S. and Germany.

Depreciation, selling and administrative expenses decreased \$3.8 million to \$149.0 million in 2000, and decreased as a percent of sales to 29.8% in 2000 compared to 30.7% in 1999. The decrease is the result of cost saving restructuring initiatives in North America and Europe. Depreciation, selling and administrative expenses at other international operations were slightly higher than in 1999.

Cost of products sold and selling, general and administrative expenses include net periodic pension benefit costs and credits. As described in note 12, pension credits, combined with pension costs, resulted in net pension credits of \$14.9 million in 2000 and \$10.2 million in 1999. Net pension credits in 2000 included credit of \$2.4 million for settlement and curtailment gains in Canada and Britain. In 1999 net pension credits included a net gain of \$2.8 million resulting from the termination benefit costs and settlement gains associated with a voluntary retirement incentive program in the U.S.

Interest expense in 2000 was \$4.5 million compared to \$4.3 million in 1999.

Currency exchange gains were \$444,000 in 2000 compared to \$694,000 in 1999. The most significant gains from currency valuation changes in 2000 occurred in North America.

Restructuring charges in 2000 were \$2.4 million compared to \$4.0 million in 1999. The charges in 2000 relate primarily to severance and early retirement costs associated with workforce reductions in Britain, Germany and Canada. The 1999 charges were principally for severance costs in Germany.

Other income, for which further information is included in note 4, was \$2.5 million in 2000 compared to \$3.8 million in 1999. Other income in 2000 included a discount of \$2.7 million on the sale of trade accounts receivable under the securitization agreement, which is more fully-described in note 15. Because the accounts receivable securitization arrangement commenced in November 1999, the comparable loss in the prior year was only \$300,000.

The effective income tax rate, for which further information is included in note 8, was 31.8% in 2000 and 29.6% in 1999. The effective rate in both years was lower than the U.S. statutory income tax rate primarily due to international operating losses in Germany and adjustments to prior years' taxes in the U.S., mainly due to foreign sales corporation tax benefits.

As further described in note 16, during 1999 the company changed the reporting periods of a number of international affiliates, including Germany which is the company's largest international affiliate. The effect of this change, which represents the after-tax results of these affiliates for December 1999, is reported as a change in accounting principle. The December 1999 net loss included severance costs related to ongoing workforce reductions in Germany

Net income for 2000 was \$23.2 million, an increase of \$8.1 million, or 54%, over 1999 net income of \$15.1 million. Basic earnings per share of common stock improved to \$1.89 in 2000 compared to \$1.16 in 1999.

#### Liquidity and Financial Condition

Cash and cash equivalents increased \$451,000 during 2001, compared to an increase of \$9.4 million in 2000. The company's principal source of financing capital expenditures and internal growth is cash flow from operations. Operations provided cash of \$30.8 million in 2001 compared to providing \$51.8 million in 2000. Lower operating cash flow in 2001 was due to changes in operating assets and liabilities. In 2001, operating cash was used to finance increases in receivables and inventories of \$14.2 and \$6.1 million, respectively, and a decrease in accounts payable and accrued liabilities of \$5.4 million. Cash provided by operations in 2000 was \$12.4 million higher than in 1999. Cash flow in 2000 benefited from reductions in receivables and inventories.

Investing activities used cash of \$22.4 million in 2001 compared to \$45.7 million in 2000. In 2001, cash was used for the acquisition of Surety Manufacturing and Testing, Ltd. In 2000, significant cash was used for the acquisitions of CairnsHELMETS and ISI Group, Inc. In 1999, acquisitions and other investing included \$2.6 million related to the acquisition of Campbell Gardwel in South Africa and \$2.7 million for development costs at the Cranberry Woods office park. Capital expenditures of \$22.3 million in 2001 and \$19.4 million in 2000 were primarily related to purchases of new or replacement tooling and production equipment. Capital expenditures of \$26.2 million in 1999 included increased expenditures for information systems and manufacturing facility improvements associated with U.S. restructuring activities.

Financing activities used cash of \$6.3 million in 2001 compared to providing \$4.1 million in 2000. In December 2001, cash was used to pay off \$5.0 million of private placement debt upon maturity. During 2000 the company issued \$40.0 million of private placement debt to finance acquisitions and common stock repurchases. The additional use of cash for financing activities in 1999 was related to reductions in short-term borrowings during the year. Dividends paid on common stock during 2001 (the 84th consecutive year of dividend payment) were 54 cents per share. Dividends paid per share in 2000 and 1999 were 47 cents and 44 cents, respectively. During 2000, the company repurchased 2.2 million shares of common stock, including 2.1 million from the family of a co-founder, for \$54.9 million. Approximately 1.1 million shares of common stock held in treasury were sold to the MSA pension plan in 2000 for \$27.0 million. As of December 31, 2001, an additional 64,774 shares may be repurchased under current authorizations.

Short term debt increased \$879,000 during 2001 to \$2.2 million. The average amount of short term debt outstanding during 2001 and 2000 was \$4.2 million and \$5.6 million, respectively. Credit available at year-end with financial institutions was the U.S. dollar equivalent of \$20.1 million, of which \$17.9 million was unused.

Long-term debt, including the current portion, decreased \$5.5 million to \$71.7 million, or 22.0% of total capital. Total capital is defined as long-term debt plus the current portion of long-term debt and shareholders' equity. During 2000, long-term debt increased \$40.2 million to \$77.1 million. The increase reflected the issuance of \$40.0 million in fixed rate senior notes payable in installments through 2012. Proceeds of the notes were used to finance acquisitions and common stock repurchases.

Outstanding indebtedness at December 31, 2001 and 2000 was as follows:

| December 31                          | 2001     | 2000     |
|--------------------------------------|----------|----------|
| Bank lines of credit.....            | \$ 2,167 | \$ 1,288 |
| Industrial development debt.....     | 10,750   | 10,750   |
| Senior notes.....                    | 60,000   | 65,000   |
| Other, including capital leases..... | 2,401    | 1,380    |
|                                      | 75,318   | 78,418   |
| Current portion.....                 | (6,940)  | (6,612)  |
|                                      | 68,378   | 71,806   |

Trade receivables increased \$4.9 million to \$50.7 million at December 31, 2001. Trade receivables expressed in number of days sales outstanding was 34 days at December 31, 2001, compared to 33 days at the end of 2000. Other receivables were \$38.3 million at December 31, 2001 and \$30.5 million at December 31, 2000, representing the company's retained interest in securitized receivables. Inventories increased \$5.2 million to \$77.9 million at December 31, 2001. Inventory measured against sales turned 7.0 times in 2001 and 6.9 times in 2000. The working capital ratio was 2.6 to 1 at the end of 2001 and 2.3 to 1 at the end of 2000.

The company's financial position remains strong and is expected to provide adequate capital resources for operations, capital expansion and dividends to shareholders.

#### Accounts Receivable Securitization

As described in note 15, the company sells eligible trade accounts receivable to Mine Safety Funding Corporation (MSF). Under accounting principles generally accepted in the United States of America, MSF is not consolidated with MSA because, as a distinct legal entity, the receivables held by MSF are isolated and beyond the reach of MSA and its creditors. This arrangement permits MSF to borrow at advantageous interest rates using its portfolio of trade receivables as security. As a result of the securitization agreement, approximately \$25 million of accounts receivable and short-term debt are not included in the company's December 31, 2001 balance sheet. At December 31, 2000, approximately \$21 million of accounts receivable and short-term debt are not included in the company's balance sheet under this arrangement.

#### Cumulative Translation Adjustments

The year-end position of the U.S. dollar relative to international currencies resulted in translation losses of \$4.9 million being charged to the cumulative translation adjustments shareholders' equity account in 2001, compared to losses of \$5.9 million in 2000 and \$5.1 million in 1999. Translation losses in 2001 occurred primarily in South Africa, Brazil, Chile and most European countries.

Translation losses in 2000 occurred primarily in Australia, South Africa, Britain, Canada, and Germany. The 1999 losses occurred in Brazil, Germany and Italy.

## Financial Instrument Market Risk

Market risk represents the risk of adverse changes in the value of a financial instrument caused by changes in currency exchange rates, interest rates and equity prices. The company is exposed to market risks related to currency exchange rates and interest rates.

Currency exchange rate sensitivity - By the very nature of its global operations, the company's cash flow and earnings are subject to fluctuations due to exchange rate changes. However, because the company operates in a number of locations around the world, currency exchange risk is well diversified. Short-term debt of international affiliates is generally payable in local currencies, which is in keeping with the company's policy of reducing currency exchange exposures by offsetting local currency assets with local currency debt.

Interest rate sensitivity - The company is exposed to changes in interest rates primarily as a result of borrowing and investing activities used to maintain liquidity and fund business operations. Because of the relatively short maturities of temporary investments and the variable rate nature of industrial development debt, these financial instruments were reported at carrying values which approximate fair value at December 31, 2001. The incremental increase in the fair value of fixed rate long term debt resulting from a hypothetical 10% decrease in interest rates would be approximately \$1.3 million. However, the company's sensitivity to interest rate declines and the corresponding increase in the fair value of its debt portfolio would unfavorably affect earnings and cash flows only to the extent that the company elected to repurchase or retire all or a portion of its fixed rate debt portfolio at prices above carrying values.

## Recently Issued Accounting Standards

FAS No. 141, Business Combinations, effective July 1, 2001, requires the purchase method of accounting for all business combinations initiated after June 30, 2001 and establishes specific criteria for the recognition of intangible assets separate from goodwill. There have been no material business combinations since June 30, 2001. The company does not expect the requirements of this statement to have a significant effect on its results or financial position.

FAS No. 142, Goodwill and Other Intangible Assets, effective January 1, 2002, eliminates the periodic amortization of goodwill and instead requires an impairment review of goodwill balances at least annually. Goodwill amortization expense in 2001 was approximately \$2.2 million. At December 31, 2001, MSA had goodwill of \$33.7 million. Pursuant to FAS No. 142, MSA will test its goodwill for impairment upon adoption and, if impairment is indicated, record such impairment as a cumulative effect of accounting change. MSA is currently evaluating the effect that adoption may have on its results and financial position.

FAS No. 143, Accounting for Asset Retirement Obligations, effective January 1, 2003, addresses accounting and reporting for legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction or normal operation of such assets. The company does not expect that the adoption of this statement will have a significant effect on its results or financial position.

FAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets, effective January 1, 2002, addresses accounting and reporting for the impairment or disposal of long-lived assets. The company does not expect that the adoption of this statement will have a significant effect on its results or financial position.

## Common Stock

At December 31, 2001, there were 12,100,727 shares of common stock outstanding. There were approximately 1,000 identifiable common stockholders on November 23, 2001, a recent date for dividends. Common stock price and volume information is included on the American Stock Exchange under the symbol MSA. The quarterly high and low price quotations and cash dividend information for common shares, adjusted to reflect the three-for-one split in May 2000, follow:

| Quarter | 2001     |          | 2000     |          |
|---------|----------|----------|----------|----------|
|         | High     | Low      | High     | Low      |
| First   | \$ 25.65 | \$ 22.00 | \$ 21.17 | \$ 18.83 |
| Second  | 34.25    | 25.45    | 26.50    | 21.38    |
| Third   | 47.92    | 30.35    | 24.25    | 18.63    |
| Fourth  | 51.90    | 32.10    | 25.88    | 19.13    |

| Quarter | Dividend<br>Per Share | Record<br>Date | Payment<br>Date |
|---------|-----------------------|----------------|-----------------|
|         |                       |                |                 |
| First   | \$ .12                | Feb. 23, 2001  | Mar. 10, 2001   |
| Second  | .14                   | May. 14, 2001  | Jun. 8, 2001    |
| Third   | .14                   | Aug. 24, 2001  | Sep. 10, 2001   |
| Fourth  | .14                   | Nov. 23, 2001  | Dec. 10, 2001   |

Total            .54  
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2000

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First            \$ .11            Feb. 25, 2000            Mar. 10, 2000  
Second            .12            May. 26, 2000            Jun. 10, 2000  
Third            .12            Aug. 25, 2000            Sep. 10, 2000  
Fourth            .12            Nov. 17, 2000            Dec. 10, 2000  
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Total            .47  
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THE COMPANY'S STOCK TRANSFER AGENT IS WELLS FARGO SHAREOWNER SERVICES, 161  
NORTH CONCORD EXCHANGE, P. O. BOX 738, SOUTH ST. PAUL, MN 55075-0738.

Responsibility for Financial Statements

The management of Mine Safety Appliances Company prepared the accompanying financial statements and is responsible for their integrity and objectivity. These statements were prepared in conformity with accounting principles generally accepted in the United States of America. The financial statements include amounts that are based on management's best estimates and judgements. The other information in this annual report is consistent with the financial statements.

The company maintains a system of internal controls, including accounting controls, and a program of internal auditing. The system of controls provides for appropriate procedures that are consistent with high standards of accounting and administration. Management believes that the company's system of internal accounting controls provides reasonable assurance that assets are safeguarded against losses from unauthorized use or disposition and that the financial records are reliable for use in preparing financial statements.

Management recognizes its responsibility for fostering a strong ethical climate so that the company's affairs are conducted according to the highest standards of personal and corporate conduct. This responsibility is characterized and reflected in a broad business ethics policy that addresses, among other things, conduct of business activities within the laws of the United States and other countries in which the company operates and potential conflicts of interests of its associates.

The Board of Directors, through its Audit Committee, assumes an oversight role in the preparation of the financial statements. The Audit Committee meets at least twice a year with the company's independent accountants and internal auditors to discuss the scope of their work and the results of their examinations.

/s/ Dennis L. Zeitler

Dennis L. Zeitler  
Vice President  
Chief Financial Officer  
and Treasurer

Report of Independent Accountants

To the Shareholders and Board of Directors of Mine Safety Appliances Company:

In our opinion, the accompanying consolidated balance sheet and the related consolidated statements of income, changes in retained earnings and accumulated other comprehensive income, and cash flows present fairly, in all material respects, the financial position of Mine Safety Appliances Company and its subsidiaries (the "Company") at December 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 16 to the financial statements, the Company changed the reporting period for certain subsidiaries in 1999.

/s/ PricewaterhouseCoopers

PricewaterhouseCoopers LLP  
February 20, 2002

Consolidated Statement of Income

(In thousands, except per share amounts)

| Year Ended December 31                                  | 2001       | 2000       | 1999       |
|---|------------|------------|------------|
| Net sales.....  | \$ 542,856 | \$ 500,367 | \$ 497,908 |
| Other income.....                                       | 2,810      | 2,466      | 3,824      |
|   | -----      | -----      | -----      |
|   | 545,666    | 502,833    | 501,732    |
|   | -----      | -----      | -----      |
| Costs and expenses                                      |            |            |            |
| Cost of products sold.....                              | 325,662    | 313,279    | 318,174    |
| Selling, general and administrative.....                | 131,102    | 124,456    | 129,478    |
| Depreciation and amortization.....                      | 26,471     | 24,557     | 23,356     |
| Interest.....   | 6,061      | 4,502      | 4,273      |
| Currency exchange losses/(gains).....                   | 1,197      | (444)      | (694)      |
| Facilities consolidation and restructuring charges..... | 2,287      | 2,433      | 3,960      |
|   | -----      | -----      | -----      |
|   | 492,780    | 468,783    | 478,547    |
|   | -----      | -----      | -----      |
| Income before income taxes.....                         | 52,886     | 34,050     | 23,185     |
| Provision for income taxes.....                         | 21,255     | 10,811     | 6,859      |
|   | -----      | -----      | -----      |
| Income before change in reporting period.....           | 31,631     | 23,239     | 16,326     |
| Change in reporting period, net of tax.....             |            |            | (1,192)    |
|   | -----      | -----      | -----      |
| Net income.....   | \$ 31,631  | \$ 23,239  | \$ 15,134  |
|   | =====      | =====      | =====      |
| Basic earnings per common share:                        |            |            |            |
| Income before change in reporting period.....           | \$ 2.65    | \$ 1.89    | \$ 1.25    |
| Change in reporting period.....                         |            |            | (.09)      |
|   | -----      | -----      | -----      |
| Net income.....   | \$ 2.65    | \$ 1.89    | \$ 1.16    |
|   | =====      | =====      | =====      |
| Diluted earnings per common share:                      |            |            |            |
| Income before change in reporting period.....           | \$ 2.61    | \$ 1.88    | \$ 1.25    |
| Change in reporting period.....                         |            |            | (.09)      |
|   | -----      | -----      | -----      |
| Net income.....   | \$ 2.61    | \$ 1.88    | \$ 1.16    |
|   | =====      | =====      | =====      |

See notes to consolidated financial statements. 2001 MSA Annual Report 21

Consolidated Balance Sheet

(In thousands, except share amounts)  
December 31

|  | 2001       | 2000       |
|--|------------|------------|
| <b>Assets</b>  |            |            |
| <b>Current Assets</b>  |            |            |
| Cash.....  | \$ 22,842  | \$ 19,408  |
| Temporary investments, at cost which approximates market.....                              | 4,150      | 7,133      |
| Trade receivables, less allowance for doubtful accounts of<br>\$2,956 and \$2,363.....     | 50,704     | 45,835     |
| Other receivables.....   | 38,325     | 30,498     |
| Inventories.....   | 77,874     | 72,681     |
| Deferred tax assets.....   | 13,633     | 14,167     |
| Prepaid expenses and other current assets.....   | 10,158     | 11,431     |
|  | -----      | -----      |
| Total current assets.....  | 217,686    | 201,153    |
|  | -----      | -----      |
| <b>Property</b>  |            |            |
| Land.....  | 5,552      | 5,411      |
| Buildings.....   | 102,555    | 106,010    |
| Machinery and equipment.....   | 272,700    | 262,372    |
| Construction in progress.....  | 8,289      | 9,948      |
|  | -----      | -----      |
| Total.....   | 389,096    | 383,741    |
| Less accumulated depreciation.....   | (236,128)  | (224,155)  |
|  | -----      | -----      |
| Net property.....  | 152,968    | 159,586    |
|  | -----      | -----      |
| <b>Other Assets</b>  |            |            |
| Prepaid pension cost.....  | 92,437     | 78,157     |
| Deferred tax assets.....   | 12,694     | 10,315     |
| Goodwill, less accumulated amortization of \$6,438 and \$4,227.....                        | 33,722     | 30,369     |
| Other noncurrent assets.....   | 11,191     | 10,103     |
|  | -----      | -----      |
| Total.....   | \$ 520,698 | \$ 489,683 |
|  | =====      | =====      |
| <b>Liabilities</b>   |            |            |
| <b>Current Liabilities</b>   |            |            |
| Notes payable and current portion of long-term debt.....                                   | \$ 6,484   | \$ 6,616   |
| Accounts payable.....  | 24,751     | 32,387     |
| Employees' compensation.....   | 14,368     | 13,202     |
| Insurance.....   | 9,267      | 8,476      |
| Taxes on income.....   | 4,812      | 2,263      |
| Other current liabilities.....   | 22,818     | 24,034     |
|  | -----      | -----      |
| Total current liabilities.....   | 82,500     | 86,978     |
|  | -----      | -----      |
| <b>Long-Term Debt</b>  |            |            |
| .....  | 67,381     | 71,806     |
|  | -----      | -----      |
| <b>Other Liabilities</b>   |            |            |
| Pensions and other employee benefits.....  | 55,428     | 54,626     |
| Deferred tax liabilities.....  | 56,053     | 47,151     |
| Other noncurrent liabilities.....  | 5,832      | 2,657      |
|  | -----      | -----      |
| Total other liabilities.....   | 117,313    | 104,434    |
|  | =====      | =====      |
| <b>Shareholders' Equity</b>  |            |            |
| Preferred stock, 41/2% cumulative, \$50 par value (callable at \$52.50)...                 | 3,569      | 3,569      |
| Common stock, no par value (shares outstanding:<br>2001--12,100,727 2000--11,827,623)..... | 25,386     | 18,841     |
| Stock compensation trust.....  | (22,179)   | (25,683)   |
| Treasury shares, at cost.....  | (133,981)  | (130,674)  |
| Deferred stock compensation.....   | (652)      | (1,145)    |
| Accumulated other comprehensive income.....  | (26,216)   | (20,869)   |
| Earnings retained in the business.....   | 407,577    | 382,426    |
|  | -----      | -----      |
| Total shareholders' equity.....  | 253,504    | 226,465    |
|  | -----      | -----      |
| Total.....   | \$ 520,698 | \$ 489,683 |
|  | =====      | =====      |

Consolidated Statement of Cash Flows

(In thousands)

Year Ended December 31

|  | 2001             | 2000             | 1999             |
|--|------------------|------------------|------------------|
| <b>Operating Activities</b>                                  |                  |                  |                  |
| Net income.....  | \$ 31,631        | \$ 23,239        | \$ 15,134        |
| Depreciation and amortization.....                           | 26,471           | 24,557           | 23,728           |
| Pensions.....  | (14,962)         | (14,900)         | (10,175)         |
| Net (gain)/loss on sale of investments and assets.....       | (1,764)          | (2,136)          | 65               |
| Deferred income taxes.....                                   | 9,518            | 3,906            | 3,269            |
| Receivables and other receivables.....                       | (14,216)         | 6,007            | 15,013           |
| Inventories.....   | (6,146)          | 11,927           | 5,272            |
| Accounts payable and accrued liabilities.....                | (5,396)          | 3,255            | (1,892)          |
| Other assets and liabilities.....                            | 4,654            | 438              | (4,592)          |
| Other--including currency exchange adjustments.....          | 1,046            | (4,520)          | (6,400)          |
| <b>Cash Flow From Operating Activities.....</b>              | <b>30,836</b>    | <b>51,773</b>    | <b>39,422</b>    |
| <b>Investing Activities</b>                                  |                  |                  |                  |
| Property additions.....                                      | (22,347)         | (19,360)         | (26,247)         |
| Property disposals.....                                      | 6,685            | 3,428            | 1,567            |
| Acquisitions, net of cash acquired, and other investing..... | (6,765)          | (29,796)         | (4,892)          |
| <b>Cash Flow From Investing Activities.....</b>              | <b>(22,427)</b>  | <b>(45,728)</b>  | <b>(29,572)</b>  |
| <b>Financing Activities</b>                                  |                  |                  |                  |
| Additions to long-term debt.....                             | 12               | 40,720           | 25,336           |
| Reductions of long-term debt.....                            | (5,259)          | (640)            | (588)            |
| Changes in notes payable and short-term debt.....            | 1,150            | (2,276)          | (28,767)         |
| Cash dividends.....  | (6,480)          | (5,881)          | (5,928)          |
| Company stock purchases.....                                 | (3,227)          | (54,948)         | (5,660)          |
| Company stock sales.....                                     | 7,477            | 27,088           | 222              |
| <b>Cash Flow From Financing Activities.....</b>              | <b>(6,327)</b>   | <b>4,063</b>     | <b>(15,385)</b>  |
| <b>Effect of exchange rate changes on cash.....</b>          | <b>(1,631)</b>   | <b>(675)</b>     | <b>(1,377)</b>   |
| <b>Increase/(decrease) in cash and cash equivalents.....</b> | <b>451</b>       | <b>9,433</b>     | <b>(6,912)</b>   |
| Beginning cash and cash equivalents.....                     | 26,541           | 17,108           | 24,020           |
| <b>Ending cash and cash equivalents.....</b>                 | <b>\$ 26,992</b> | <b>\$ 26,541</b> | <b>\$ 17,108</b> |
| <b>Supplemental cash flow information:</b>                   |                  |                  |                  |
| Interest payments.....                                       | \$ 6,566         | \$ 3,419         | \$ 4,299         |
| Income tax payments.....                                     | 9,765            | 6,789            | 3,648            |
| <b>Noncash investing activity:</b>                           |                  |                  |                  |
| Investment sold for other current assets.....                |                  | 1,334            |                  |

See notes to consolidated financial statements. 2001 MSA Annual Report 23

Consolidated Statement of Changes in Retained Earnings And Accumulated Other

Comprehensive Income

(In thousands)

|  | Retained<br>Earnings | Accumulated<br>Other<br>Comprehensive<br>Income | Comprehensive<br>Income |
|--|----------------------|---|-------------------------|
| Balances January 1, 1999.....                  | \$ 355,862           | \$ (10,240)                                     |                         |
| Net income.....                                | 15,134               |   | \$ 15,134               |
| Cumulative translation adjustments.....        |                      | (5,141)   | (5,141)                 |
| Minimum pension liability adjustments (a)..... |                      | 550   | 550                     |
| Comprehensive income.....                      |                      |   | \$ 10,543               |
| Common dividends.....                          | (5,878)              |   |                         |
| Preferred dividends.....                       | (50)                 |   |                         |
| Balances December 31, 1999.....                | 365,068              | (14,831)  |                         |
| Net income.....                                | 23,239               |   | \$ 23,239               |
| Cumulative translation adjustments.....        |                      | (5,921)   | (5,921)                 |
| Minimum pension liability adjustments (a)..... |                      | (117)   | (117)                   |
| Comprehensive income.....                      |                      |   | \$ 17,201               |
| Common dividends.....                          | (5,832)              |   |                         |
| Preferred dividends.....                       | (49)                 |   |                         |
| Balances December 31, 2000.....                | 382,426              | (20,869)  |                         |
| Net income.....                                | 31,631               |   | \$ 31,631               |
| Cumulative translation adjustments.....        |                      | (4,934)   | (4,934)                 |
| Minimum pension liability adjustments (a)..... |                      | (413)   | (413)                   |
| Comprehensive income.....                      |                      |   | \$ 26,284               |
| Common dividends.....                          | (6,432)              |   |                         |
| Preferred dividends.....                       | (48)                 |   |                         |
| Balances December 31, 2001.....                | \$ 407,577           | \$ (26,216)                                     |                         |

(a) - Charges in 2001 and 2000 to minimum pension liability adjustments are net of tax benefit of \$275,000 and \$78,000, respectively. The credit in 1999 is net of tax expense of \$367,000.

Components of accumulated other comprehensive income are as follows:

|   | (In thousands) |             |             |
|---|----------------|-------------|-------------|
|   | 2001           | 2000        | 1999        |
| Cumulative translation adjustments.....     | \$ (25,365)    | \$ (20,431) | \$ (14,510) |
| Minimum pension liability adjustments.....  | (851)          | (438)       | (321)       |
| Accumulated other comprehensive income..... | \$ (26,216)    | \$ (20,869) | \$ (14,831) |

## Note 1--Basis of Presentation

Certain prior year balances have been reclassified to conform with the current year presentation.

Significant accounting policies are stated in italics in the applicable notes to consolidated financial statements.

THE PREPARATION OF FINANCIAL STATEMENTS IN CONFORMITY WITH ACCOUNTING PRINCIPLES GENERALLY ACCEPTED IN THE UNITED STATES OF AMERICA REQUIRES MANAGEMENT TO MAKE ESTIMATES AND ASSUMPTIONS THAT AFFECT THE REPORTED AMOUNTS OF ASSETS AND LIABILITIES AND DISCLOSURE OF CONTINGENT ASSETS AND LIABILITIES AT THE DATE OF THE FINANCIAL STATEMENTS AND THE REPORTED AMOUNTS OF REVENUES AND EXPENSES DURING THE REPORTING PERIOD. ACTUAL RESULTS COULD DIFFER FROM THOSE ESTIMATES.

ALL SIGNIFICANT MAJORITY-OWNED COMPANIES, EXCEPT MINE SAFETY FUNDING CORPORATION, ARE INCLUDED IN THE CONSOLIDATED FINANCIAL STATEMENTS. INVESTMENTS IN WHICH THE COMPANY HAS AN EQUITY INTEREST OF 20% TO 50% ARE CARRIED AT EQUITY IN NET ASSETS. INTERCOMPANY TRANSACTIONS ARE ELIMINATED IN CONSOLIDATION.

REVENUE FROM THE SALE OF PRODUCTS IS RECOGNIZED WHEN BOTH RISK OF LOSS AND TITLE HAVE TRANSFERRED TO THE CUSTOMER.

PROPERTY IS STATED AT COST. DEPRECIATION IS BASED ON ESTIMATED USEFUL LIVES USING ACCELERATED AND STRAIGHT-LINE METHODS. MAINTENANCE AND REPAIRS ARE CHARGED TO EXPENSE. RENEWALS AND BETTERMENTS WHICH SUBSTANTIALLY EXTEND THE USEFUL LIFE OF PROPERTY ARE CAPITALIZED. PROFITS OR LOSSES RESULTING FROM DISPOSITIONS ARE INCLUDED IN INCOME.

INTANGIBLE ASSETS, INCLUDING GOODWILL AND PATENTS, ARE AMORTIZED ON A STRAIGHT LINE BASIS OVER PERIODS NOT EXCEEDING 35 YEARS.

THE FINANCIAL STATEMENTS OF COMPANIES FOR WHICH THE UNITED STATES DOLLAR IS DETERMINED TO BE THE FUNCTIONAL CURRENCY ARE TRANSLATED USING CURRENT AND HISTORIC EXCHANGE RATES; ADJUSTMENTS ARE INCLUDED IN INCOME FOR THE CURRENT PERIOD. THE FINANCIAL STATEMENTS OF ALL OTHER COMPANIES ARE TRANSLATED FROM THEIR FUNCTIONAL CURRENCY INTO UNITED STATES DOLLARS USING CURRENT EXCHANGE RATES; TRANSLATION ADJUSTMENTS ARE NOT INCLUDED IN INCOME BUT ARE ACCUMULATED IN A SEPARATE EQUITY ACCOUNT. TRANSACTION GAINS AND LOSSES ARE RECOGNIZED IN INCOME FOR THE CURRENT PERIOD.

CASH AND CASH EQUIVALENTS IN THE CONSOLIDATED STATEMENT OF CASH FLOWS INCLUDES TEMPORARY INVESTMENTS THAT ARE READILY MARKETABLE AND HAVE MINIMAL RISK OF CHANGE IN VALUE. CERTAIN SECURITIES HAVE MATURITIES IN EXCESS OF NINETY DAYS; BUT, AS PART OF THE COMPANY'S CASH MANAGEMENT PROGRAM, MATURITIES ARE SCHEDULED BASED ON EXPECTED CASH NEEDS FOR THE ENSUING TWELVE MONTHS.

COMPREHENSIVE INCOME, DETERMINED IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 130, INCLUDES NET INCOME AND CHANGES IN OTHER COMPREHENSIVE INCOME ITEMS WHICH ARE REPORTED IN SHAREHOLDERS' EQUITY. OTHER COMPREHENSIVE INCOME IS REPORTED NET OF RELATED INCOME TAX EXPENSE OR BENEFIT.

## Note 2--Restructuring

Restructuring charges of \$2,287,000 relate to a plant closing in the U.S. and workforce reductions in Europe in 2001, \$2,433,000 in 2000 and \$3,960,000 in 1999 relate to workforce reductions, primarily in Britain, Germany and Canada in 2000 and in Germany in 1999.

## Note 3--Research and Development Expense

RESEARCH AND DEVELOPMENT COSTS, CHARGED TO COST OF PRODUCTS SOLD AS INCURRED, were \$18,195,000 in 2001, \$17,241,000 in 2000, and \$17,097,000 in 1999.

## Note 4--Other Income

|                             | (In thousands) |         |        |
|-----------------------------|----------------|---------|--------|
|                             | 2001           | 2000    | 1999   |
| Interest.....               | \$1,183        | \$1,243 | \$ 914 |
| Rent.....                   | 739            | 957     | 1,310  |
| Dividends.....              | 625            | 555     |        |
| Dispositions of assets..... | (136)          | (528)   | 1,796  |
| Other, net.....             | 399            | 239     | (196)  |
| Total.....                  | 2,810          | 2,466   | 3,824  |

## Note 5--Inventories

MOST U.S. INVENTORIES ARE VALUED ON THE LAST-IN, FIRST-OUT (LIFO) COST METHOD. OTHER INVENTORIES ARE VALUED AT THE LOWER OF COST, USING AVERAGE OR CURRENT STANDARD COSTS WHICH APPROXIMATE ACTUAL COSTS ON A FIRST-IN, FIRST-OUT (FIFO) BASIS, OR MARKET, DETERMINED BY REPLACEMENT COST OR NET REALIZABLE VALUE.

Reductions in certain inventory quantities during 2000 and 1999 resulted in liquidations of LIFO inventory quantities carried at lower costs prevailing in prior years. The effect of these liquidations reduced cost of sales by \$1,920,000 in 2000, and \$216,000 in 1999, and increased net income by \$1,171,000 (\$.10 per share), and \$132,000 (\$.01 per share), respectively.

(In thousands)

|   | 2001     | 2000     |
|---|----------|----------|
| Finished products.....                    | \$30,375 | \$30,743 |
| Work in process.....                      | 12,099   | 10,451   |
| Raw materials and supplies.....           | 35,400   | 31,487   |
| Total inventories.....                    | 77,874   | 72,681   |
| Excess of FIFO costs over LIFO costs..... | 38,059   | 42,711   |

Inventories stated on the LIFO basis represent 52%, 45%, and 48% of the total inventories at December 31, 2001, 2000, and 1999, respectively.

Note 6--Long-Term Debt

(In thousands)

|                                     | 2001     | 2000     |
|-------------------------------------|----------|----------|
| U.S.                                |          |          |
| Industrial development debt issues  |          |          |
| payable through 2022, 3.1%.....     | \$10,750 | \$10,750 |
| Series A Senior Notes               |          |          |
| payable through 2001, 7.3%.....     |          | 5,000    |
| Series B Senior Notes               |          |          |
| payable through 2006, 7.69%.....    | 20,000   | 20,000   |
| Senior Notes                        |          |          |
| payable through 2012, 8.39%.....    | 40,000   | 40,000   |
| Other, 18%.....                     | 38       | 61       |
| International                       |          |          |
| Various notes payable through 2003, |          |          |
| 4.5% to 7% (\$830 and \$723         |          |          |
| collateralized by pledge of         |          |          |
| assets located abroad).....         | 868      | 1,319    |
| Total.....                          | 71,656   | 77,130   |
| Amounts due within one year.....    | 4,275    | 5,324    |
| Long-term debt.....                 | 67,381   | 71,806   |

Approximate maturities of these obligations over the next five years are \$4,275,000 in 2002, \$4,028,000 in 2003, \$4,000,000 in 2004, \$4,000,000 in 2005, and \$8,000,000 in 2006. Some debt agreements require the company to maintain certain financial ratios and minimum net worth and contain restrictions on the total amount of debt.

## Note 7--Segment Information

SEGMENT INFORMATION IS REPORTED IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 131, WHICH DESIGNATES THE INTERNAL FINANCIAL INFORMATION THAT IS USED BY MANAGEMENT FOR MAKING OPERATING DECISIONS AND ASSESSING PERFORMANCE AS THE SOURCE FOR IDENTIFYING THE COMPANY'S OPERATING SEGMENTS.

The company is organized into three geographic operating segments: North America, Europe, and Other International. The company is engaged in the manufacture and sale of safety and health equipment, including respiratory protective equipment, head protection, eye and face protection, hearing protectors, safety clothing, industrial emergency care products, mining safety equipment, thermal imaging cameras and monitoring instruments. In addition, the company manufactures and sells specialty chemicals, including boron-based chemicals.

Reportable segment information is presented in the following table:

|                                       | (In thousands) |           |                     |                   |                     |
|---------------------------------------|----------------|-----------|---------------------|-------------------|---------------------|
|                                       | North America  | Europe    | Other International | Reconciling items | Consolidated totals |
| <b>2001</b>                           |                |           |                     |                   |                     |
| Sales to external customers.....      | \$376,766      | \$ 94,187 | \$71,735            | \$ 168            | \$542,856           |
| Intercompany sales.....               | 20,074         | 21,668    | 2,124               | (43,866)          |                     |
| Net income.....                       | 28,355         | 130       | 3,619               | (473)             | 31,631              |
| Total assets.....                     | 399,912        | 96,372    | 48,816              | (24,402)          | 520,698             |
| Interest income.....                  | 513            | 146       | 408                 | 116               | 1,183               |
| Interest expense.....                 | 5,556          | 156       | 349                 |                   | 6,061               |
| Noncash items:                        |                |           |                     |                   |                     |
| Depreciation and amortization.....    | 21,595         | 3,680     | 1,170               | 26                | 26,471              |
| Pension income (expense).....         | 17,885         | (2,783)   | (140)               |                   | 14,962              |
| Equity in earnings of affiliates..... |                |           | 40                  |                   | 40                  |
| Income tax provision.....             | 18,596         | 900       | 1,732               | 27                | 21,255              |
| Investments in affiliates.....        | 1,374          |           | 135                 |                   | 1,509               |
| Property additions.....               | 15,767         | 4,916     | 1,621               | 43                | 22,347              |
| Fixed assets.....                     | 128,768        | 18,118    | 6,033               | 49                | 152,968             |
| <b>2000</b>                           |                |           |                     |                   |                     |
| Sales to external customers.....      | 327,849        | 99,119    | 73,199              | 200               | 500,367             |
| Intercompany sales.....               | 25,573         | 16,389    | 1,453               | (43,415)          |                     |
| Net income.....                       | 21,876         | (2,225)   | 3,624               | (36)              | 23,239              |
| Total assets.....                     | 365,035        | 93,955    | 50,296              | (19,603)          | 489,683             |
| Interest income.....                  | 604            | 285       | 329                 | 25                | 1,243               |
| Interest expense.....                 | 3,791          | 216       | 495                 |                   | 4,502               |
| Noncash items:                        |                |           |                     |                   |                     |
| Depreciation and amortization.....    | 19,744         | 3,374     | 1,314               | 125               | 24,557              |
| Pension income (expense).....         | 16,640         | (1,552)   | (188)               |                   | 14,900              |
| Equity in earnings of affiliates..... |                |           | 25                  |                   | 25                  |
| Income tax provision (benefit).....   | 11,001         | (2,041)   | 1,776               | 75                | 10,811              |
| Investments in affiliates.....        | 1,358          |           | 95                  |                   | 1,453               |
| Property additions.....               | 14,031         | 3,630     | 1,694               | 5                 | 19,360              |
| Fixed assets.....                     | 132,597        | 20,681    | 6,290               | 18                | 159,586             |
| <b>1999</b>                           |                |           |                     |                   |                     |
| Sales to external customers.....      | 315,087        | 113,365   | 68,032              | 1,424             | 497,908             |
| Intercompany sales.....               | 34,128         | 17,637    | 1,691               | (53,456)          |                     |
| Net income.....                       | 14,991         | (1,724)   | 3,498               | (1,631)           | 15,134              |
| Total assets.....                     | 330,884        | 92,531    | 49,836              | (21,510)          | 451,741             |
| Interest income.....                  | 298            | 406       | 190                 | 20                | 914                 |
| Interest expense.....                 | 3,267          | 285       | 723                 | (2)               | 4,273               |
| Noncash items:                        |                |           |                     |                   |                     |
| Depreciation and amortization.....    | 17,451         | 4,386     | 1,392               | 127               | 23,356              |
| Pension income (expense).....         | 13,002         | (3,149)   | 322                 |                   | 10,175              |
| Equity in earnings of affiliates..... |                |           | 45                  |                   | 45                  |
| Income tax provision (benefit).....   | 7,502          | (2,123)   | 1,657               | (177)             | 6,859               |
| Investments in affiliates.....        | 1,358          |           | 70                  |                   | 1,428               |
| Property additions.....               | 20,028         | 4,662     | 1,547               | 10                | 26,247              |
| Fixed assets.....                     | 135,146        | 21,679    | 6,660               | 24                | 163,509             |

## Sales by product line:

|                                  | (In thousands) |           |           |
|----------------------------------|----------------|-----------|-----------|
|                                  | 2001           | 2000      | 1999      |
| Safety and health equipment..... | \$510,083      | \$468,032 | \$462,608 |
| Specialty chemicals.....         | 32,773         | 32,335    | 35,300    |
|                                  | 542,856        | 500,367   | 497,908   |

Reconciling items consist primarily of intercompany eliminations and items reported at the corporate level.

Sales are attributed to segments based on the location of the selling company. Sales in Germany were \$46,865,000 in 2001, \$47,471,000 in 2000, and \$56,017,000 in 1999.

Note 8--Income Taxes

INCOME TAXES ARE ACCOUNTED FOR IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 109. DEFERRED TAX BALANCES ARE STATED AT ENACTED TAX RATES EXPECTED TO BE IN EFFECT WHEN TAXES ARE ACTUALLY PAID OR DEDUCTIONS ARE TAKEN. NO PROVISION IS MADE FOR UNDISTRIBUTED EARNINGS OF INTERNATIONAL AFFILIATES SINCE LITTLE OR NO TAX WOULD RESULT UNDER APPLICABLE EXISTING STATUTES OR BECAUSE MANAGEMENT INTENDS THAT THESE EARNINGS BE PERMANENTLY REINVESTED FOR WORKING CAPITAL AND CAPITAL EXPENDITURE REQUIREMENTS.

The U.S. and non-U.S. components of income before income taxes and provisions for income taxes are summarized as follows:

|                                    | (In thousands) |           |           |
|------------------------------------|----------------|-----------|-----------|
|                                    | 2001           | 2000      | 1999      |
| Income Before Income Taxes         |                |           |           |
| U.S. income.....                   | \$ 43,472      | \$ 32,053 | \$ 23,790 |
| Non-U.S. income.....               | 6,226          | 6,080     | 3,225     |
| Currency translation (losses)..... | (776)          |           | (95)      |
| Eliminations.....                  | 3,964          | (4,083)   | (3,735)   |
| Income Before Income Taxes.....    | 52,886         | 34,050    | 23,185    |
| Provision For Income Taxes         |                |           |           |
| Current                            |                |           |           |
| Federal.....                       | 8,039          | 2,713     | (834)     |
| State.....                         | 978            | 804       | 367       |
| Non-U.S.....                       | 2,720          | 3,388     | 3,281     |
| Total current provision.....       | 11,737         | 6,905     | 2,814     |
| Deferred                           |                |           |           |
| Federal.....                       | 8,590          | 5,540     | 5,779     |
| State.....                         | 1,778          | 1,221     | 921       |
| Non-U.S.....                       | (850)          | (2,855)   | (2,655)   |
| Total deferred provision.....      | 9,518          | 3,906     | 4,045     |
| Provision for Income Taxes.....    | 21,255         | 10,811    | 6,859     |

The following is a reconciliation of income taxes calculated at the U.S. Federal income tax rate of 35% to the provision for income taxes:

|   |        |         |       |
|---|--------|---------|-------|
| Provision for income taxes at statutory rate..... | 18,510 | 11,918  | 8,115 |
| State income taxes, net of federal benefit.....   | 1,897  | 1,316   | 837   |
| Foreign tax credit valuation allowance.....       | 1,000  |         |       |
| Adjustment of prior years' income taxes.....      | 16     | (782)   | (954) |
| Non-U.S. taxes.....                               | 108    | (1,323) | (774) |
| Other--net.....                                   | (276)  | (318)   | (365) |
| Provision for income taxes.....                   | 21,255 | 10,811  | 6,859 |

The components of deferred taxes are as follows:

|  | (In thousands) |          |
|--|----------------|----------|
|  | 2001           | 2000     |
| Deferred tax assets                            |                |          |
| Postretirement benefits.....                   | \$ 5,701       | \$ 5,946 |
| Inventory reserves and unrealized profits..... | 3,463          | 4,745    |
| Vacation allowances.....                       | 2,441          | 2,050    |
| Loss and credit carryforwards.....             | 13,472         | 12,590   |
| Liability insurance.....                       | 1,931          | 2,036    |
| Accrued liabilities.....                       | 1,214          | 2,274    |
| Allowance for doubtful accounts.....           | 502            | 483      |
| Trademarks and license fees.....               | 692            | 642      |
| Warranties.....                                | 997            | 871      |
| Other.....                                     | (5)            | 397      |
| Total deferred tax assets.....                 | 30,408         | 32,034   |
| Valuation allowance.....                       | (1,000)        |          |
| Net deferred tax assets.....                   | 29,408         | 32,034   |
| Deferred tax liabilities                       |                |          |
| Depreciation.....                              | (24,234)       | (26,296) |
| Pension.....                                   | (32,511)       | (25,582) |
| Basis of investments.....                      | (2,389)        | (2,825)  |
| Total deferred tax liabilities.....            | (59,134)       | (54,703) |
| Net deferred taxes.....                        | (29,726)       | (22,669) |

-----  
The valuation allowance recorded in 2001 reduces deferred tax assets related to foreign tax credit carryforwards because the character of future taxable income may not allow realization within the prescribed carryforward period.

The company has tax credit carryforwards of \$2,546,000 that expire between 2003 and 2005. The company also has net operating loss carryforwards of \$9,434,000 with no expiration date, primarily in Germany, \$608,000 that expire in 2008 and \$884,000 that expire in 2019.

Undistributed earnings of international companies for which U.S. income taxes have not been provided were \$82,786,000 at December 31, 2001.

## Note 9--Capital Stock

- . Common stock, no par value - 60,000,000 shares authorized
- . Second cumulative preferred voting stock, \$10 par value - 1,000,000 shares authorized; none issued
- . 4 1/2% cumulative preferred stock, \$50 par value- 100,000 shares authorized; 71,373 shares issued and 50,313 shares (\$1,629,000) held in treasury (600 shares, \$21,000, purchased for treasury in 2001; no activity in 2000; 400 shares, \$13,000, purchased for treasury in 1999).

Common stock activity is summarized as follows:

|   | Shares        |                          |                    | Dollars (In thousands) |                          |               |
|---|---------------|--------------------------|--------------------|------------------------|--------------------------|---------------|
|   | Shares Issued | Stock Compensation Trust | Shares In Treasury | Shares Issued          | Stock Compensation Trust | Treasury Cost |
| Balances January 1, 1999.....                       | 6,778,599     | (571,690)                | (1,828,035)        | \$ 12,564              | \$ (26,869)              | \$ (89,494)   |
| Stock options exercised.....                        |               | 4,060                    |                    | 32                     | 190                      |               |
| Treasury shares purchased.....                      |               |                          | (91,263)           |                        |                          | (5,660)       |
| Balances December 31, 1999.....                     | 6,778,599     | (567,630)                | (1,919,298)        | 12,596                 | (26,679)                 | (95,154)      |
| Restricted stock awards (pre-split).....            |               | 19,760                   |                    | 318                    | 929                      |               |
| Treasury shares purchased (pre-split).....          |               |                          | (74,616)           |                        |                          | (4,994)       |
| Three-for-one stock split.....                      | 13,557,198    | (1,095,740)              | (3,987,828)        |                        |                          |               |
| Restricted stock awards forfeited (post-split)..... |               |                          | (2,790)            |                        |                          | (58)          |
| Stock options exercised (post-split).....           |               | 4,290                    |                    | 21                     | 67                       |               |
| Treasury shares purchased (post-split).....         |               |                          | (2,009,322)        |                        |                          | (49,954)      |
| Treasury shares issued (post-split).....            |               |                          | 1,125,000          | 5,906                  |                          | 21,094        |
| Balances December 31, 2000.....                     | 20,335,797    | (1,639,320)              | (6,868,854)        | 18,841                 | (25,683)                 | (129,066)     |
| Restricted stock awards.....                        |               | 860                      |                    | 12                     | 13                       |               |
| Restricted stock awards forfeited.....              |               |                          | (3,900)            |                        |                          | (80)          |
| Stock options exercised.....                        | 147,254       | 223,087                  |                    | 4,226                  | 3,491                    |               |
| Tax benefit on exercise of stock options.....       |               |                          |                    | 2,307                  |                          |               |
| Treasury shares purchased.....                      |               |                          | (94,197)           |                        |                          | (3,206)       |
| Balances December 31, 2001.....                     | 20,483,051    | (1,415,373)              | (6,966,951)        | 25,386                 | (22,179)                 | (132,352)     |

On May 10, 2000, the company's shareholders approved a three-for-one stock split of both the issued and authorized common stock, which was distributed on May 24, 2000, to shareholders of record on May 12, 2000.

During 2000, the company purchased 2.1 million shares of common stock from a major shareholder for \$54.9 million. In a subsequent transaction, the company sold 1,125,000 shares of common stock that were held in treasury to the MSA Non-Contributory Pension Plan for Employees for \$27 million.

The Mine Safety Appliances Company Stock Compensation Trust was established to fund certain benefit plans, including employee stock options and awards. Shares held by the Stock Compensation Trust, and the corresponding cost of those shares, are reported as a reduction of common shares issued. Differences between the cost of the shares held by the Stock Compensation Trust and the market value of shares released for stock-related benefits are reflected in shares issued.

The company has a Shareholder Rights Plan under which each outstanding share of common stock is granted one-third of a preferred share purchase right. The rights are exercisable for a fraction of a share of preferred stock, only if a person or group acquires or commences a tender offer for 15% or more of the company's common stock. In the event a person or group acquires 15% or more of the outstanding common stock, each right not owned by that person or group will entitle the holder to purchase that number of shares of common stock having a value equal to twice the \$225 exercise price. The Board of Directors may redeem the rights for \$.01 per right at any time until ten days after the announcement that a 15% position has been acquired. The rights expire on February 21, 2007.

## Note 10--Earnings per Share

BASIC EARNINGS PER SHARE IS COMPUTED ON THE WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING DURING THE PERIOD. DILUTED EARNINGS PER SHARE INCLUDES THE EFFECT OF THE WEIGHTED AVERAGE STOCK OPTIONS OUTSTANDING DURING THE PERIOD, USING THE TREASURY STOCK METHOD. ANTIDILUTIVE OPTIONS ARE NOT CONSIDERED IN COMPUTING DILUTED EARNINGS PER SHARE.

|  | (In thousands) |           |           |
|--|----------------|-----------|-----------|
|  | 2001           | 2000      | 1999      |
| Net income.....                              | \$ 31,631      | \$ 23,239 | \$ 15,134 |
| Preferred stock dividends.....               | (48)           | (49)      | (50)      |
| Income available to common shareholders..... | 31,583         | 23,190    | 15,084    |

|                                 |        |        |        |
|---------------------------------|--------|--------|--------|
| Basic shares outstanding.....   | 11,910 | 12,301 | 12,972 |
| Stock options.....              | 169    | 55     | 33     |
|                                 | -----  |        |        |
| Diluted shares outstanding..... | 12,079 | 12,356 | 13,005 |
|                                 | -----  |        |        |
| Antidilutive stock options..... | 0      | 18     | 108    |
|                                 | -----  |        |        |

Note 11--Short-Term Debt

Short-term bank lines of credit amounted to \$20,109,000 of which \$17,942,000 was unused at December 31, 2001. Generally, these short-term lines of credit are renewable annually, and there are no significant commitment fees or compensating balance requirements. Short-term borrowings with banks, which exclude the current portion of long-term debt, were \$2,167,000 and \$1,288,000 at December 31, 2001 and 2000, respectively. The average month-end balance of total short-term borrowings during 2001 was \$4,157,000 while the maximum month-end balance of \$9,582,000 occurred at March 31, 2001. The average interest rate during 2001 was approximately 8% based upon total short-term interest expense divided by the average month-end balance outstanding, and 6% at year-end.

Note 12--Pensions and Other Postretirement Benefits

THE COMPANY'S NON-CONTRIBUTORY PENSION PLANS ARE ACCOUNTED FOR IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 87 WHICH REQUIRES USE OF THE PROJECTED UNIT CREDIT COST METHOD TO DETERMINE THE PROJECTED BENEFIT OBLIGATION AND PLAN COST. THE PRINCIPAL U.S. PLAN IS FUNDED IN COMPLIANCE WITH THE EMPLOYEE RETIREMENT INCOME SECURITY ACT (ERISA). IT IS THE GENERAL POLICY TO FUND CURRENT COSTS FOR THE INTERNATIONAL PLANS EXCEPT IN GERMANY AND MEXICO, WHERE IT IS COMMON PRACTICE AND PERMISSIBLE UNDER TAX LAWS TO ACCRUE BOOK RESERVES. A minimum liability is recognized for unfunded defined benefit plans for which the accumulated benefit obligation exceeds accrued pension costs. The amount of the minimum liability in excess of unrecognized prior service cost, net of tax benefit, is recorded as a reduction in shareholders' equity. Non-contributory plan benefits are generally based on years of service and employees' compensation during the last years of employment. Benefits are paid from funds previously provided to trustees or are paid by the company and charged to the book reserves.

During 2001, the principal U.S. and German non-contributory pension plans were amended to permit the payment of certain unfunded German benefits from assets of the U.S. plan. Under the terms of the amendments, the U.S. plan retroactively reimbursed the German company during 2001 for certain pension benefits paid in 1999 and 2000.

The company provides certain health care benefits and limited life insurance for retired employees and their eligible dependents, THE COSTS FOR WHICH ARE ACCOUNTED FOR IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS (SFAS) NO. 106. SFAS NO. 106 REQUIRES RECOGNITION OF RETIREE HEALTH AND LIFE INSURANCE BENEFITS DURING THE EMPLOYEES' SERVICE WITH THE COMPANY.

Information pertaining to defined benefit pension plans and other postretirement benefits plans, PREPARED IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 132, is provided in the following table.

|   | (In thousands)   |            |                |           |
|---|------------------|------------|----------------|-----------|
|   | Pension Benefits |            | Other Benefits |           |
|   | 2001             | 2000       | 2001           | 2000      |
| <b>Change in Benefit Obligations</b>                      |                  |            |                |           |
| Benefit obligations at January 1.....                     | \$ 177,032       | \$ 186,886 | \$ 19,370      | \$ 18,546 |
| Service cost.....   | 4,645            | 4,358      | 502            | 409       |
| Interest cost.....  | 12,393           | 12,537     | 1,488          | 1,390     |
| Employee contributions.....                               | 231              | 221        |                |           |
| Plan amendments.....                                      |                  | 621        |                |           |
| Actuarial losses.....                                     | 14,594           | 1,281      | 2,484          | 858       |
| Benefits paid.....  | (11,998)         | (12,540)   | (2,009)        | (1,833)   |
| Curtailments.....   | (167)            | (332)      |                |           |
| Settlements.....  | (1,245)          | (12,460)   |                |           |
| Currency translation effects.....                         | (1,882)          | (3,540)    |                |           |
| Benefit obligations at December 31.....                   | 193,603          | 177,032    | 21,835         | 19,370    |
| <b>Change in Plan Assets</b>                              |                  |            |                |           |
| Fair value of plan assets at January 1.....               | 324,824          | 341,250    |                |           |
| Actual return on plan assets.....                         | 5,383            | 9,921      |                |           |
| Employer contributions.....                               | 1,177            | 2,247      | 94             | 43        |
| Employee contributions.....                               | 231              | 221        |                |           |
| Benefits paid.....  | (11,998)         | (12,540)   | (2,009)        | (1,833)   |
| Section 420 transfer to retiree medical plan.....         | (1,915)          | (1,790)    | 1,915          | 1,790     |
| Reimbursement of German benefits paid in 1999 and 2000... | (1,888)          |            |                |           |
| Settlements.....  | (1,245)          | (12,460)   |                |           |
| Currency translation effects.....                         | (447)            | (2,025)    |                |           |
| Fair value of plan assets at December 31.....             | 314,122          | 324,824    |                |           |
| <b>Funded Status</b>                                      |                  |            |                |           |
| Funded status at December 31.....                         | 120,519          | 147,792    | (21,835)       | (19,370)  |
| Unrecognized transition gains.....                        | (748)            | (1,274)    |                |           |
| Unrecognized prior service cost.....                      | 1,488            | 1,806      | (957)          | (1,065)   |
| Unrecognized net actuarial (gains) losses.....            | (65,695)         | (106,703)  | 6,833          | 4,726     |
| Prepaid (accrued) benefit cost.....                       | 55,564           | 41,621     | (15,959)       | (15,709)  |
| <b>Amounts Recognized in the Balance Sheet</b>            |                  |            |                |           |
| Prepaid benefit cost.....                                 | 92,437           | 78,157     |                |           |
| Accrued benefit liability.....                            | (38,987)         | (37,954)   | (15,959)       | (15,709)  |
| Intangible asset.....                                     | 696              | 689        |                |           |

|  |        |        |          |          |
|--|--------|--------|----------|----------|
| Minimum pension liability adjustments..... | 1,418  | 729    |          |          |
| Prepaid (accrued) benefit cost.....        | 55,564 | 41,621 | (15,959) | (15,709) |

(In thousands, except percents)

|   | Pension Benefits |           | Other Benefits |      |
|---|------------------|-----------|----------------|------|
|   | 2001             | 2000      | 2001           | 2000 |
| Actuarial Assumptions at December 31                                |                  |           |                |      |
| Discount rate.....  | 7%               | 7%        | 7.5%           | 7.5% |
| Expected return on plan assets.....                                 | 9%               | 9%        |                |      |
| Rate of compensation increases.....                                 | 4%               | 4%        |                |      |
| Plans with Accumulated Benefit Obligations in Excess of Plan Assets |                  |           |                |      |
| Projected benefit obligations.....                                  | \$40,547         | \$ 39,761 |                |      |
| Accumulated benefit obligations.....                                | 37,759           | 38,329    |                |      |
| Plan assets.....  | 0                | 0         |                |      |

| (In thousands)                                   | Pension Benefits |          |          | Other Benefits |        |        |
|--|------------------|----------|----------|----------------|--------|--------|
|  | 2001             | 2000     | 1999     | 2001           | 2000   | 1999   |
| Components of Net Periodic Benefit Cost (Credit) |                  |          |          |                |        |        |
| Service cost.....                                | \$ 4,645         | \$ 4,358 | \$ 5,426 | \$ 502         | \$ 409 | \$ 437 |
| Interest cost.....                               | 12,393           | 12,537   | 13,049   | 1,488          | 1,390  | 1,212  |
| Expected return on plan assets.....              | (27,202)         | (25,181) | (23,061) |                |        |        |
| Amortization of transition asset.....            | (597)            | (624)    | (703)    |                |        |        |
| Amortization of prior service cost.....          | 300              | 302      | 382      | (108)          | (108)  | (8)    |
| Recognized net actuarial (gains) losses.....     | (4,745)          | (3,914)  | (2,487)  | 377            | 310    | 278    |
| Settlement gain.....                             |                  | (2,093)  | (8,623)  |                |        |        |
| Curtailment loss (gain).....                     | 244              | (285)    |          |                |        |        |
| Termination benefits.....                        |                  |          | 5,842    |                |        |        |
| Net periodic benefit cost (credit).....          | (14,962)         | (14,900) | (10,175) | 2,259          | 2,001  | 1,919  |

For measurement purposes, a 7.5% increase in the costs of covered health care benefits was assumed for the year 2001, decreasing by .5% for each successive year to 4% in 2008 and thereafter. A one-percentage-point change in assumed health care cost trend rates would have increased or decreased the other postretirement benefit obligations and current year plan expense by approximately \$1 million and \$200,000, respectively.

Expense for defined contribution pension plans was \$2,739,000 in 2001, \$2,619,000 in 2000, and \$2,750,000 in 1999.

At December 31, 2001, the U.S. defined benefit pension plan owned 1,072,500 shares (market value \$43.1 million) of the company's common stock. During 2001, the pension plan received dividends of \$601,200 on these shares.

#### Note 13--Acquisitions

On February 1, 2001, the company acquired Surety Manufacturing and Testing, Ltd. (Surety), a leading provider of fall protection equipment and rescue systems, for \$7.1 million. The acquisition was recorded using the purchase method of accounting. The purchase price was allocated to assets acquired and liabilities assumed based on estimated fair values and included \$5.6 million in goodwill, which is being amortized on a straight line basis over 20 years.

During 2000, the company acquired ISI Group, Inc. (ISIG), an established manufacturer of infrared thermal imaging cameras, and CairnsHELMETS (Cairns), a leading supplier of firefighter head protection. The acquisitions were recorded using the purchase method of accounting. The aggregate purchase price of \$29.7 million was allocated to the assets acquired and the liabilities assumed based on estimated fair values and included \$24.9 million in goodwill, which is being amortized on a straight line basis over 10 years for ISIG and 35 years for Cairns.

The acquisition agreement for ISIG provides for additional consideration to be paid to the seller annually based on a defined calculation of gross profit from the sale of certain thermal imaging cameras in 2000 through 2003. Additional consideration is charged to goodwill when paid and amortization expense adjusted accordingly.

The results of operations of Surety, ISIG and Cairns are included in the financial statements from their respective dates of acquisition.

The following unaudited pro forma summary presents information as if Surety, ISIG and Cairns had been acquired at January 1, 1999:

| (In thousands, except earnings per share) | 2000       | 1999       |
|---|------------|------------|
| Net sales.....                            | \$ 516,537 | \$ 522,385 |
| Net income.....                           | 23,721     | 15,794     |
| Basic earnings per share.....             | 1.92       | 1.21       |

The pro forma amounts include certain adjustments, primarily to recognize goodwill amortization and interest expense, and do not recognize any benefits

which may be achieved from combining operations. The pro forma information does not necessarily reflect the actual results that would have occurred and is not necessarily indicative of future results of operations of the combined companies.

#### Note 14--Leases

The company leases office space, manufacturing and warehouse facilities, automobiles and other equipment under operating lease arrangements. Automobiles leased under capital lease arrangements are included in other noncurrent assets. Rent expense was \$6,202,000 in 2001, \$6,120,000 in 2000, and \$5,813,000 in 1999. Minimum rental commitments under noncancelable operating and capital leases are \$2,974,000 in 2002, \$2,175,000 in 2003, \$1,315,000 in 2004, \$699,000 in 2005, \$473,000 in 2006, and \$3,254,000 after 2006.

Note 15--Accounts Receivable Securitization

STATEMENT OF FINANCIAL ACCOUNTING STANDARD NO. 125, ACCOUNTING FOR TRANSFERS AND SERVICING OF FINANCIAL ASSETS AND EXTINGUISHMENT OF LIABILITIES (FAS NO. 125), APPLIES A CONTROL-ORIENTED, FINANCIAL COMPONENTS APPROACH TO FINANCIAL-ASSET-TRANSFER TRANSACTIONS. FINANCIAL ASSETS, NET OF RETAINED INTERESTS, ARE REMOVED FROM THE BALANCE SHEET WHEN THE ASSETS ARE SOLD AND CONTROL IS SURRENDERED. IN SEPTEMBER 2000, FAS NO. 125 WAS REPLACED BY FAS NO. 140 WHICH REVISED CERTAIN ACCOUNTING AND DISCLOSURE REQUIREMENTS FOR SECURITIZATIONS AND OTHER TRANSFERS OF FINANCIAL ASSETS, BUT CARRIED OVER MOST FAS NO. 125 PROVISIONS.

In November 1999, the company and Mine Safety Funding Corporation (MSF) entered into securitization agreements under which the company sells MSF, on a continuous basis, an undivided interest in eligible trade accounts receivable generated by the company, while maintaining a subordinated interest in a portion of the receivables. MSF is an unconsolidated wholly-owned, bankruptcy-remote subsidiary of the company. The company services the sold receivables for MSF at market rates and, accordingly, no servicing asset or liability has been recorded. MSF and the company have also entered into securitization agreements with financial institutions under which MSF may sell up to \$30 million of accounts receivable to a multi-seller asset-backed commercial paper issuer.

At December 31, 2001, accounts receivable of \$65.0 million were owned by MSF. The company held a subordinated interest in these receivables of \$39.3 million, of which \$38.3 million is classified as other receivables. Net proceeds to the company from the securitization arrangement were \$25.0 million at December 31, 2001. The company incurred net costs associated with the securitization facility of \$2.3 million in 2001, representing the discount loss on the sale of the receivables, partially offset by related servicing income and dividends received from MSF. The net cost is inclusive of \$598,000 in bad debt expense borne by MSF during 2001.

At December 31, 2000, accounts receivable of \$53.2 million were owned by MSF. The company held a subordinated interest in these receivables of \$31.5 million, of which \$30.5 million is classified as other receivables. Net proceeds to the company from the securitization arrangement were \$21.0 million at December 31, 2000. The company incurred net costs associated with the securitization facility of \$1.9 million in 2000, representing the discount loss on the sale of the receivables, partially offset by related servicing income and dividends received from MSF.

The key economic assumptions used to measure the retained interest at December 31, 2001 were a discount rate of 4.3% and an estimated life of 2.5 months. At December 31, 2001, an adverse change in the discount rate or estimated life of 10% and 20% would reduce the fair value of the retained interest by \$55,000 and \$110,000, respectively. The effect of hypothetical changes in fair value based on variations in assumptions should be used with caution and generally cannot be extrapolated. Additionally, the effect on the fair value of the retained interest of changing a particular assumption has been calculated without changing other assumptions. In reality, a change in one factor may result in changes in others.

Note 16--Change in Reporting Period

Beginning in 1999, certain international affiliates which had been consolidated based on fiscal years ending November 30 changed to fiscal years ending December 31. The after-tax effect of the change in reporting period is included in the 1999 income statement as a change in accounting principle.

|   | (In thousands) |
|---|----------------|
| Net sales.....  | \$ 11,290      |
| Cost of products sold.....                              | 8,629          |
| Selling, general and administrative.....                | 3,497          |
| Depreciation and amortization.....                      | 372            |
| Facilities consolidation and restructuring charges..... | 421            |
| Other expenses, net.....                                | 258            |
| Income tax benefit.....                                 | (695)          |
|   | -----          |
| Change in reporting period, net of tax.....             | (1,192)        |

Note 17--Recently Issued Accounting Standards

In June 2001, the Financial Accounting Standards Board (FASB) issued FAS No. 141, Business Combinations, and FAS No.142, Goodwill and Other Intangible Assets. FAS No. 141, requires that the purchase method of accounting be used for all business combinations initiated after June 30, 2001 and establishes specific criteria for the recognition of intangible assets other than goodwill. There have been no material business combinations since June 30, 2001. The company does not expect the requirements of this statement to have a significant effect on its results or financial position. FAS No. 142, effective January 1, 2002, eliminates the periodic amortization of goodwill and instead requires an impairment review of goodwill balances at least annually. Goodwill amortization expense in 2001 was approximately \$2.2 million. At December 31, 2001, MSA had goodwill of \$33.7 million. Pursuant to FAS No. 142, MSA will test its goodwill for impairment upon adoption and, if impairment is indicated, record such impairment as a cumulative effect of accounting change. MSA is currently evaluating the effect that adoption may have on its results of operations and financial position.

In June 2001, the FASB issued FAS No. 143, Accounting for Asset Retirement Obligations. FAS No. 143 addresses accounting and reporting for legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction or normal operation of such assets. The company

will adopt FAS No. 143 as of January 1, 2003 and does not expect that the adoption of this statement will have a significant effect on its results or financial position.

In August 2001, the FASB issued FAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets. FAS No. 144 addresses accounting and reporting for the impairment or disposal of long-lived assets. The company will adopt FAS No. 144 effective January 1, 2002 and does not expect that the adoption of this statement will have a significant effect on its results or financial position.

## Note 18--Stock Plans

The 1998 Management Share Incentive Plan permits the granting of restricted stock awards and stock options to eligible key employees through March 2008. The 1990 Non-Employee Directors' Stock Option Plan, as amended April 1, 2001, provides for annual grants of stock options and restricted stock awards to eligible directors. As of December 31, 2001, there were 1,023,370 shares and 74,940 shares, respectively, reserved for future grants pursuant to these plans.

THE COMPANY APPLIES ACCOUNTING PRINCIPLES BOARD OPINION 25 AND RELATED INTERPRETATIONS IN ACCOUNTING FOR THE PLANS. ACCORDINGLY, NO COMPENSATION COST IS RECOGNIZED FOR STOCK OPTION GRANTS. COMPENSATION COST FOR RESTRICTED STOCK AWARDS IS MEASURED BY THE MARKET VALUE OF THE SHARES WHEN AWARDED AND IS AMORTIZED BY CHARGES TO OPERATIONS OVER THE PERIOD THAT THE EMPLOYEE OR NON-EMPLOYEE DIRECTOR PROVIDES THE SERVICE.

Restricted stock awards are granted without payment to the company in consideration of services to be performed in the ensuing four years for employees and three years for directors. Restricted stock awards of 860 shares, with a fair value of \$29.20 per share, were granted in 2001. Restricted stock awards of 19,760 shares (pre-split) with a fair value of \$63.06 per share, were granted in 2000. Restricted stock awards expense charged to operations was \$437,000 in 2001, \$547,000 in 2000, and \$448,000 in 1999.

Stock options are generally granted at market value option prices and expire after ten years (limited instances of option prices in excess of market value and expiration after five years). If compensation cost for stock option grants had been determined based on the fair value method provided in Statement of Financial Accounting Standards No. 123, proforma net income in 2001, 2000 and 1999 would have been \$30,112,000, \$21,775,000, and \$14,609,000 and earnings per basic share would have been \$2.52, \$1.77, and \$1.13, respectively. The fair value of the options granted was estimated at the grant date using the Black-Scholes option pricing model and the following weighted average assumptions for options granted in 2001, 2000, and 1999, respectively: risk-free interest rate of 5.2%, 7.0%, and 5.1%; dividend yield of 2.1%, 2.3%, and 2.0%; expected option life of 9.9 years, 9.8 years, and 9.7 years; and expected volatility factor of 23%, 19%, and 19%.

A summary of stock option activity under the two plans, adjusted to reflect the three-for-one stock split in May 2000, follows:

|                                       | 2001      |                                 | 2000     |                                 | 1999     |                                 |
|---------------------------------------|-----------|---------------------------------|----------|---------------------------------|----------|---------------------------------|
|                                       | Shares    | Weighted-Average Exercise Price | Shares   | Weighted-Average Exercise Price | Shares   | Weighted-Average Exercise Price |
| Outstanding at beginning of year..... | 544,794   | \$ 20.08                        | 305,379  | \$ 19.24                        | 215,715  | \$ 18.25                        |
| Granted.....                          | 244,344   | 25.38                           | 267,120  | 21.11                           | 101,844  | 21.24                           |
| Exercised.....                        | (370,341) | 20.84                           | (4,290)  | 20.56                           | (12,180) | 18.30                           |
| Forfeited.....                        | (5,310)   | 18.79                           | (23,415) | 19.30                           |          |                                 |
| Outstanding at end of year.....       | 413,487   | 22.55                           | 544,794  | 20.08                           | 305,379  | 19.24                           |
| Options exercisable at year-end.....  | 413,487   |                                 | 544,794  |                                 | 305,379  |                                 |

The weighted average remaining contractual life of all options outstanding at December 31, 2001 was approximately 7.8 years. The weighted average remaining contractual life by exercise price range is summarized as follows:

Exercise prices of \$13.38 to \$19.00 - 3.4 years  
 Exercise prices of \$20.19 to \$23.88 - 7.2 years  
 Exercise prices of \$25.21 to \$29.20 - 9.2 years

Note 19--Quarterly Financial Information (Unaudited)  
 (In thousands, except earnings per share)

|                            | 2001      |           |           |           |           | 2000      |           |            |           |           |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
|                            | Quarters  |           |           |           |           | Quarters  |           |            |           |           |
|                            | 1st       | 2nd       | 3rd       | 4th       | Year      | 1st       | 2nd       | 3rd        | 4th       | Year      |
| Net sales                  | \$133,595 | \$134,781 | \$137,079 | \$137,401 | \$542,856 | \$129,236 | \$121,683 | \$ 119,745 | \$129,703 | \$500,367 |
| Gross profit               | 53,152    | 53,010    | 53,140    | 57,892    | 217,194   | 50,387    | 43,305    | 42,939     | 50,457    | 187,088   |
| Net income                 | 7,847     | 6,974     | 7,793     | 9,017     | 31,631    | 7,459     | 2,826     | 3,920      | 9,034     | 23,239    |
| Basic earnings per share   | .66       | .59       | .65       | .75       | 2.65      | .58       | .22       | .33        | .76       | 1.89      |
| Diluted earnings per share | .66       | .58       | .64       | .73       | 2.61      | .58       | .22       | .33        | .76       | 1.88      |

Earnings per share information has been adjusted to reflect the three-for-one

stock split in May 2000.

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Summary of Selected Financial Data

| Summary of Operations                                       | 2001       | 2000      | 1999      | 1998       | 1997       |
|---|------------|-----------|-----------|------------|------------|
| (In thousands, except as noted)                             |            |           |           |            |            |
| Net sales   | \$ 542,856 | \$500,367 | \$497,908 | \$ 500,193 | \$ 503,191 |
| Other income  | 2,810      | 2,466     | 3,824     | 6,026      | 6,802      |
| Cost of products sold (see note below)                      | 325,662    | 313,279   | 318,174   | 315,761    | 306,280    |
| Selling, general and administrative (see note below)        | 131,102    | 124,456   | 129,478   | 135,258    | 139,256    |
| Depreciation and amortization                               | 26,471     | 24,557    | 23,356    | 22,398     | 23,233     |
| Interest expense  | 6,061      | 4,502     | 4,273     | 3,258      | 2,781      |
| Currency exchange losses (gains)                            | 1,197      | (444)     | (694)     | 315        | 40         |
| Facilities consolidation and restructuring charges          | 2,287      | 2,433     | 3,960     | 1,021      | 2,164      |
| Provision for income taxes                                  | 21,255     | 10,811    | 6,859     | 9,933      | 14,385     |
| Income before change in reporting period                    | 31,631     | 23,239    | 16,326    | 18,275     | 21,854     |
| Change in reporting period, net of tax                      |            |           | (1,192)   |            |            |
| Net Income  | 31,631     | 23,239    | 15,134    | 18,275     | 21,854     |
| Basic per common share (in dollars)                         | 2.65       | 1.89      | 1.16      | 1.37       | 1.60       |
| Diluted per common share (in dollars)                       | 2.61       | 1.88      | 1.16      | 1.37       | 1.60       |
| Dividends paid per common share (in dollars)                | .54        | .47       | .44       | .44        | .41        |
| Weighted average number of common shares outstanding--basic | 11,910     | 12,301    | 12,972    | 13,290     | 13,608     |
| Year-End Position   |            |           |           |            |            |
| Working capital   | \$ 135,186 | \$114,175 | \$123,085 | \$ 119,203 | \$ 116,373 |
| Working capital ratio                                       | 2.6        | 2.3       | 2.5       | 2.1        | 2.1        |
| Net property  | 152,968    | 159,586   | 163,509   | 164,561    | 157,957    |
| Total assets  | 520,698    | 489,683   | 451,741   | 457,721    | 437,153    |
| Long-term debt  | 67,381     | 71,806    | 36,550    | 11,919     | 12,270     |
| Common shareholders' equity                                 | 252,451    | 225,382   | 241,374   | 241,743    | 240,004    |
| Equity per common share (in dollars)                        | 20.86      | 19.06     | 18.75     | 18.40      | 17.95      |
| Market capitalization                                       | 485,844    | 297,169   | 274,624   | 310,904    | 291,858    |
| Note:   |            |           |           |            |            |
| Noncash pension income, pre-tax                             | \$ 14,962  | \$ 14,900 | \$ 10,175 | \$ 10,344  | \$ 10,881  |

Cost of products sold and selling, general and administrative expenses include noncash pension income.

## MINE SAFETY APPLIANCES COMPANY

The registrant's present affiliates include the following:

| Name<br>-----                              | State or Other<br>Jurisdiction of<br>Incorporation<br>----- |
|--|---|
| Compania MSA de Argentina S.A.             | Argentina   |
| MSA (Aust.) Pty. Limited                   | Australia   |
| MSA-Auer Sicherheitstechnik Vertriebs GmbH | Austria   |
| MSA Export Limited                         | Barbados  |
| MSA Belgium NV                             | Belgium   |
| MSA do Brasil Ltda.                        | Brazil  |
| MSA Canada                                 | Canada  |
| MSA de Chile Ltda.                         | Chile   |
| Wuxi-MSA Safety Equipment Co. Ltd.         | China   |
| Rose Manufacturing Company                 | Colorado  |
| MSA International, Inc.                    | Delaware  |
| MSA de France                              | France  |
| MSA Auer                                   | Germany   |
| MSA-Auer Hungaria Safety Technology        | Hungary   |
| MSA Italiana S.p.A.                        | Italy   |
| MSA Japan Ltd.                             | Japan   |
| MSA de Mexico, S.A. de C.V.                | Mexico  |
| MSA Nederland, B.V.                        | Netherlands   |
| MSA del Peru S.A.C.                        | Peru  |
| MSA-Auer Polska Sp. z o.o.                 | Poland  |
| MSA (Britain) Limited                      | Scotland  |
| MSA S.E. Asia Pte. Ltd.                    | Singapore   |
| MSA Africa (Pty.) Ltd.                     | South Africa  |
| MSA Espanola S.A.                          | Spain   |
| MSA Nordic AB                              | Sweden  |
| Aritron Instrument A.G.                    | Switzerland   |
| MSA Zimbabwe (Pvt.) Limited                | Zimbabwe  |

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The above-mentioned affiliated companies are included in the consolidated financial statements of the registrant filed as part of this annual report. The names of certain other affiliates, which considered in the aggregate as a single affiliate would not constitute a significant affiliate, have been omitted.

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CONSENT OF INDEPENDENT ACCOUNTANTS

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We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 33-22284), the Registration Statement of Form S-8 (No.33-43696) and the Registration Statement on Form S-8 (No.333-51983) of Mine Safety Appliances Company of our report dated February 20, 2002 relating to the financial statements, which appears in the Annual Report to Shareholders, which is incorporated in this Annual Report on Form 10-K. We also consent to the incorporation by reference of our report dated February 20, 2002 relating to the Financial Statement Schedule, which appears in this Form 10-K.

PricewaterhouseCoopers LLP

Pittsburgh, Pennsylvania  
March 27, 2002