

**UNITED STATES  
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, 2012

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 1-11430

**MINERALS TECHNOLOGIES INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)  
**622 Third Avenue**  
**38th Floor**  
**New York, New York**  
(Address of principal executive office)

**25-1190717**  
(I.R.S. Employer  
Identification Number)

**10017-6707**  
(Zip Code)

**(212) 878-1800**

(Registrant's telephone number, including area code)

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

**Title of each class**

Common Stock, \$.10 par value

**Name of each exchange  
on which registered**

New York Stock Exchange

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

None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

Indicate by check mark if Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.

Yes  No

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 (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

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 the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. .

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer

Accelerated Filer

Non-accelerated Filer

Smaller Reporting Company

(Do not check if smaller reporting company)

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes  No

The aggregate market value of the voting stock held by non-affiliates of the Registrant, based upon the closing price at which the stock was sold as of June 29, 2012, was approximately \$983 million. Solely for the purposes of this calculation, shares of common stock held by officers, directors and beneficial owners of 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 8, 2013, the Registrant had outstanding 35,071,669 shares of common stock, all of one class.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's Proxy Statement for its 2013 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K.

**MINERALS TECHNOLOGIES INC.**  
**2012 FORM 10-K ANNUAL REPORT**  
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## PART I

### Item 1. Business

Minerals Technologies Inc. (the "Company") is a resource- and technology-based company that develops, produces and markets worldwide a broad range of specialty mineral, mineral-based and synthetic mineral products and supporting systems and services. The Company has two reportable segments: Specialty Minerals and Refractories. The Specialty Minerals segment produces and sells the synthetic mineral product precipitated calcium carbonate ("PCC") and processed mineral product quicklime ("lime"), and mines mineral ores then processes and sells natural mineral products, primarily limestone and talc. This segment's products are used principally in the paper, building materials, paint and coatings, glass, ceramic, polymer, food, automotive and pharmaceutical industries. The Refractories segment produces and markets monolithic and shaped refractory materials and specialty products, services and application and measurement equipment, and calcium metal and metallurgical wire products. Refractories segment products are primarily used in high-temperature applications in the steel, non-ferrous metal and glass industries.

The Company maintains a research and development focus. The Company's research and development capability for developing and introducing technologically advanced new products has enabled the Company to anticipate and satisfy changing customer requirements, creating market opportunities through new product development and product application innovations.

#### Specialty Minerals Segment

##### *PCC Products and Markets*

The Company's PCC product line net sales were \$546.2 million, \$560.6 million and \$554.6 million for the years ended December 31, 2012, 2011 and 2010, respectively. The Company's sales of PCC have been, and are expected to continue to be, made primarily to the printing and writing papers segment of the paper industry. The Company also produces PCC for sale to companies in the polymer, food and pharmaceutical industries.

##### *PCC Products - Paper*

In the paper industry, the Company's PCC is used:

- As a filler in the production of coated and uncoated wood-free printing and writing papers, such as office papers;
- As a filler for coated and uncoated groundwood (wood-containing) paper such as magazine and catalog papers; and
- As a coating pigment for both wood-free and groundwood papers.

The Company's Paper PCC product line net sales were \$480.3 million, \$497.0 million and \$496.6 million for the years ended December 31, 2012, 2011 and 2010, respectively.

Approximately 50% of the Company's sales consist of PCC sold to papermakers from "satellite" PCC plants. A satellite PCC plant is a PCC manufacturing facility located near a paper mill, thereby eliminating costs of transporting PCC from remote production sites to the paper mill. The Company believes the competitive advantages offered by improved economics and superior optical characteristics of paper produced with PCC manufactured by the Company's satellite PCC plants resulted in substantial growth in the number of the Company's satellite PCC plants since the first such plant was built in 1986. For information with respect to the locations of the Company's PCC plants as of December 31, 2012, see Item 2, "Properties," below.

The Company currently manufactures several customized PCC product forms using proprietary processes. Each product form is designed to provide optimum balance of paper properties including brightness, opacity, bulk, strength and improved printability. The Company's research and development and technical service staffs focus on expanding sales from its existing and potential new satellite PCC plants as well as developing new technologies for new applications. These technologies include, among others, acid-tolerant ("AT®") PCC, which allows PCC to be introduced to the large wood-containing segment of the printing and writing paper market, OPACARB® PCC, a family of products for paper coating, and our FulFill™ family of products, a system of high-filler technologies that offers papermakers a variety of efficient, flexible solutions which decrease dependency on natural fibers.

The Company owns, staffs, operates and maintains all of its satellite PCC facilities, and owns or licenses the related technology. Generally, the Company and its paper mill customers enter into long-term evergreen agreements, initially ten years in length, pursuant to which the Company supplies substantially all of the customer's precipitated calcium carbonate filler requirements. The Company is generally permitted to sell to third-parties PCC produced at a satellite plant in excess of the host paper mill's requirement.

The Company also sells a range of PCC products to paper manufacturers from production sites not associated with paper mills. These merchant facilities are located at Adams, Massachusetts; Birmingham, England; and Walsum, Germany.

## *PCC Markets - Paper*

*Uncoated Wood-Free Printing and Writing Papers – North America.* Beginning in the mid-1980's, as a result of a concentrated research and development effort, the Company's satellite PCC plants facilitated the conversion of a substantial percentage of North American uncoated wood-free printing and writing paper producers to lower-cost alkaline papermaking technology. The Company estimates that during 2012, more than 90% of North American uncoated wood-free paper was produced employing alkaline technology. Presently, the Company owns and operates 17 commercial satellite PCC plants located at paper mills that produce uncoated wood-free printing and writing papers in North America.

*Uncoated Wood-Free Printing and Writing Papers – Outside North America.* The Company estimates the amount of uncoated wood-free printing and writing papers produced outside of North America at facilities that can be served by satellite and merchant PCC plants is more than twice as large (measured in tons of paper produced) as the North American uncoated wood-free paper market currently served by the Company. The Company believes that the superior brightness, opacity and bulking characteristics offered by its PCC products allow it to compete with suppliers of ground limestone and other filler products outside of North America. Presently, the Company owns and operates 23 commercial satellite PCC plants located at paper mills that produce uncoated wood-free printing and writing papers outside of North America.

*Uncoated Groundwood Paper.* The uncoated groundwood paper market, including newsprint, represents approximately 30% of worldwide paper production. Paper mills producing wood-containing paper still generally employ acid papermaking technology. The conversion to alkaline technology by these mills has been hampered by the tendency of wood-containing papers to darken in an alkaline environment. The Company has developed proprietary application technology for the manufacture of high-quality groundwood paper in an acidic environment using PCC (AT® PCC). Furthermore, as groundwood or wood-containing paper mills use larger quantities of recycled fiber, there is a trend toward the use of neutral papermaking technology in this segment for which the Company presently supplies traditional PCC chemistries. The Company now supplies PCC at about 11 groundwood paper mills around the world and licenses its technology to a ground calcium carbonate producer to help accelerate the conversion from acid to alkaline papermaking.

*Coated Paper.* The Company continues to pursue satellite PCC opportunities in coated paper markets where our products provide unique performance and/or cost reduction benefits to papermakers and printers. Our Opacarb product line is designed to create value to the papermaker and can be used alone or in combination with other coating pigments. PCC coating products are produced at 8 of the Company's PCC plants worldwide.

### *Specialty PCC Products and Markets*

The Company also produces and sells a full range of dry PCC products on a merchant basis for non-paper applications. The Company's Specialty PCC product line net sales were \$65.9 million, \$63.6 million and \$58.0 million for the years ended December 31, 2012, 2011 and 2010, respectively. The Company sells surface-treated and untreated grades of PCC to the polymer industry for use in automotive and construction applications, and to the adhesives and printing inks industries. The Company's PCC is also used by the food and pharmaceutical industries as a source of bio-available calcium in tablets and food applications, as a buffering agent in tablets, and as a mild abrasive in toothpaste. The Company produces PCC for specialty applications from production sites at Adams, Massachusetts and Lifford, England.

### *Processed Minerals - Products and Markets*

The Company mines and processes natural mineral products, primarily limestone and talc. The Company also manufactures lime, a limestone-based product. The Company's net sales of processed mineral products were \$116.0 million, \$115.5 million and \$110.4 million for the years ended December 31, 2012, 2011 and 2010, respectively. Net sales of talc products were \$48.1 million, \$46.9 million and \$44.0 million for the years ended December 31, 2012, 2011 and 2010, respectively. Net sales of ground calcium carbonate ("GCC") products, which are principally lime and limestone, were \$67.9 million, \$68.6 million and \$66.4 million for the years ended December 31, 2012, 2011 and 2010, respectively.

The Company mines and processes GCC products at its reserves in the eastern and western parts of the United States. GCC is used and sold in the construction, automotive and consumer markets.

Lime produced at the Company's Adams, Massachusetts, and Lifford, United Kingdom, facilities is used primarily as a raw material for the manufacture of PCC at these sites and is sold commercially to various chemical and other industries.

The Company mines, beneficiates and processes talc at its Barretts site, located near Dillon, Montana. Talc is sold worldwide in finely ground form for ceramic applications and in North America for paint and coatings and polymer applications. Because of the exceptional chemical purity of the Barretts ore, a significant portion of worldwide automotive catalytic converter ceramic substrates contain the Company's Barretts talc.

The Company's natural mineral products are supported by the Company's limestone reserves located in the western and eastern parts of the United States, and talc reserves located in Montana. The Company estimates these reserves, at current usage levels, to be in excess of 30 years at its limestone production facilities and approximately 20 years at its talc production facility. See Item 2, "Properties," for more information with respect to those facilities.

Our high quality limestone, dolomitic limestone, and talc products are defined primarily by the chemistry and color characteristics of the ore bodies. Ore samples are analyzed by x-ray fluorescence (XRF) and other techniques to determine purity and more generally by Hunter brightness measurement to determine dry brightness and the Hunter yellowness (b) value. We serve multiple markets from each of our operations, each of which has different requirements relating to a combination of chemical and physical properties.

## **Refractories Segment**

### *Refractory Products and Markets*

#### *Refractories Products*

The Company offers a broad range of monolithic and pre-cast refractory products and related systems and services. The Company's Refractory segment net sales were \$343.4 million, \$368.8 million and \$337.4 million for the years ended December 31, 2012, 2011 and 2010, respectively.

Refractory product sales are often supported by Company-supplied proprietary application equipment and on-site technical service support. The Company's proprietary application equipment is used to apply refractory materials to the walls of steel-making furnaces and other high temperature vessels to maintain and extend their useful life. Net sales of refractory products, including those for non-ferrous applications, were \$264.1 million, \$287.4 million and \$264.5 million for the years ended December 31, 2012, 2011 and 2010. The Company's proprietary application system, such as its MINSCAN<sup>®</sup>, allow for remote-controlled application of the Company's refractory products in steel-making furnaces, as well as in steel ladles and blast furnaces. Since the steel-making industry is characterized by intense price competition, which results in a continuing emphasis on increased productivity, these application systems and the technologically advanced refractory materials developed in the Company's research laboratories have been well accepted by the Company's customers. These products allow steel makers to improve their performance through, among other things, the application of monolithic refractories to furnace linings while the furnace is at operating temperature, thereby eliminating the need for furnace cool-down periods and steel-production interruption. The result is a lower overall cost for steel produced by steel makers.

The Company's technical service staff and application equipment assist customers to achieve desired productivity objectives. The Company's technicians are also able to conduct laser measurement of refractory wear, sometimes in conjunction with robotic application tools, to improve refractory performance at many customer locations. The Company believes that these services, together with its refractory product offerings, provide it with a strategic marketing advantage.

Over the past several years the Refractories segment has continued to reformulate its products and application technology to maintain its competitive advantage in the market place. Some of the new products the Company has introduced in the past several years include:

- **HOTCRETE<sup>®</sup>**: High durability shotcrete products for applications at high temperatures in ferrous applications such as steel ladles, electric arc furnaces (EAF) and basic oxygen furnaces (BOF) furnaces;
- **FASTFIRE<sup>®</sup>**: High durability castable and shotcrete products in the non-ferrous and ferrous industries with the added benefit of rapid dry-out capabilities;
- **OPTIFORM<sup>®</sup>**: A system of products and equipment for the rapid continuous casting of refractories for applications such as steel ladle safety linings;
- **ENDURATEQ<sup>®</sup>**: A high durability refractory shape for glass contact applications such as plungers and orifice rings; and
- **DECTEQ<sup>™</sup>**: A system for the automatic control of electrical power feeding electrodes used in electric arc steel making furnaces.
- **LACAM<sup>®</sup> Torpedo**: A laser scanning system that measures the refractory lining thickness inside a Hot Iron (Torpedo) Ladle. The torpedo ladles transport liquid iron from a blast furnace to the steel plant.
- **LACAM<sup>®</sup>**: A new, fourth generation Lacam<sup>®</sup> laser measurement device for use in the worldwide steel industry that is 17 times faster than the previous version. This new technology provides the fastest and most accurate laser scanning for hot surfaces available today.

#### *Refractories Markets*

The principal market for the Company's refractory products is the steel industry. Management believes that certain trends in the steel industry will provide growth opportunities for the Company. These trends include growth and quality improvements in select geographic regions (e.g., China, Middle East, Eastern Europe and India) the development of improved manufacturing processes such as thin-slab casting, the trend in North America to shift production from integrated mills to electric arc furnaces (mini-mills) and the ever-increasing need for improved productivity and longer lasting refractories.

The Company sells its refractory products in the following markets:

*Steel Furnace.* The Company sells gunnable monolithic refractory products and application systems to users of basic oxygen furnaces and electric arc furnaces for application on furnace walls to prolong the life of furnace linings.

*Other Iron and Steel.* The Company sells monolithic refractory materials and pre-cast refractory shapes for iron and steel ladles, vacuum degassers, continuous casting tundishes, blast furnaces and reheating furnaces. The Company offers a full line of materials to satisfy most continuous casting refractory applications. This full line consists of gunnable materials, refractory shapes and permanent linings.

*Industrial Refractory Systems.* The Company sells refractory shapes and linings to non-steel refractories consuming industries including glass, cement, aluminum and petrochemicals, power generation and other non-steel industries. The Company also produces a specialized line of carbon composites and pyrolytic graphite primarily sold under the PYROID® trademark, primarily to the aerospace and electronics industries.

#### *Metallurgical Products and Markets*

The Company produces a number of other technologically advanced products for the steel industry, including calcium metal, metallurgical wire products and a number of metal treatment specialty products. Net sales of metallurgical products were \$79.3 million, \$81.4 million and \$72.9 million for the years ended December 31, 2012, 2011 and 2010. The Company manufactures calcium metal at its Canaan, Connecticut, facility and purchases calcium in international markets. Calcium metal is used in the manufacture of the Company's PFERROCAL® solid-core calcium wire, and is also sold for use in the manufacture of batteries and magnets. We also manufacture cored wires at our Canaan, Connecticut and Hengelo, Netherlands, manufacturing sites. The Company sells metallurgical wire products and associated wire-injection equipment for use in the production of high-quality steel. These metallurgical wire products are injected into molten steel to improve castability and reduce imperfections. The steel produced is used for high-pressure pipeline and other premium-grade steel applications.

#### **Marketing and Sales**

The Company relies principally on its worldwide direct sales force to market its products. The direct sales force is augmented by technical service teams that are familiar with the industries to which the Company markets its products, and by several regional distributors. The Company's sales force works closely with the Company's technical service staff to solve technical and other issues faced by the Company's customers. The Company's technical service staff assists paper producers in ongoing evaluations of the use of PCC for paper coating and filling applications. In the Refractory segment, the Company's technical service personnel advise on the use of refractory materials, and, in many cases pursuant to service agreements, apply the refractory materials to the customers' furnaces and other vessels. Continued use of skilled technical service teams is an important component of the Company's business strategy.

The Company works closely with its customers to ensure that their requirements are satisfied, and it often trains and supports customer personnel in the use of the Company's products. The Company oversees domestic marketing and sales activities from Bethlehem, Pennsylvania, and from regional sales offices in the eastern and western United States. The Company's international marketing and sales efforts are directed from regional centers located in Brussels, Belgium; Sao Jose Dos Campos, Brazil; and Shanghai, China. The Company believes its processed minerals are at regional locations that satisfy the stringent delivery requirements of the industries they serve. The Company also believes that its worldwide network of sales personnel and manufacturing sites facilitates the continued international expansion.

#### **Raw Materials**

The Company depends in part on having an adequate supply of raw materials for its manufacturing operations, particularly lime and carbon dioxide for the PCC product line, magnesia and alumina for its Refractory operations, and on having adequate access to ore reserves at its mining operations.

The Company uses lime in the production of PCC and is a significant purchaser of lime worldwide. Generally, lime is purchased under long-term supply contracts from unaffiliated suppliers located in close geographic proximity to the Company's PCC plants. Generally, the lime utilized in our business is readily available from numerous sources, including, to a small extent, from our Adams, Massachusetts facility. Carbon dioxide is readily available in exhaust gas from the host paper mills, or other operations at our merchant facilities.

The principal raw materials used in the Company's monolithic refractory products are refractory-grade magnesia and various forms of alumina silicates. The Company purchases a portion of its magnesia requirements from sources in China. The price and availability of bulk raw materials from China are subject to fluctuations that could affect the Company's sales to its customers. In addition, the volatility of transportation costs has also affected the delivered cost of raw materials imported from China to North America and Europe. The Company has developed alternate sources of magnesia over the past few years that have reduced our reliance on China sourced magnesia. The alumina we utilize in our business is readily available from numerous sources. The

Company also purchases calcium metal, calcium silicide, graphite, calcium carbide and various alloys for use in the production of metallurgical wire products and uses lime and aluminum in the production of calcium metal.

## **Competition**

The Company is continually engaged in efforts to develop new products and technologies and refine existing products and technologies in order to remain competitive and to position itself as a market leader.

With respect to its PCC products, the Company competes for sales to the paper industry with other minerals, such as GCC and kaolin, based in large part upon technological know-how, patents and processes that allow the Company to deliver PCC that it believes imparts gloss, brightness, opacity and other properties to paper on an economical basis. The Company is the leading manufacturer and supplier of PCC to the paper industry.

The Company competes in sales of its limestone and talc based primarily upon quality, price, and geographic location.

With respect to the Company's refractory products, competitive conditions vary by geographic region. Competition is based upon the performance characteristics of the product (including strength, consistency and ease of application), price, and the availability of technical support.

## **Research and Development**

Many of the Company's product lines are technologically advanced. Our expertise in inorganic chemistry, crystallography and structural analysis, fine particle technology and other aspects of materials science apply to and support all of our product lines. The Company's business strategy for growth in sales and profitability depends, to a large extent, on the continued success of its research and development activities. Among the significant achievements of the Company's research and development efforts have been: the satellite PCC plant concept; PCC crystal morphologies for paper coating; AT<sup>®</sup> PCC for wood-containing papers; FulFill<sup>™</sup> high filler technology systems; the development of FASTFIRE<sup>®</sup> and OPTIFORM<sup>®</sup> shotcrete refractory products; LACAM<sup>®</sup> laser-based refractory measurement systems; the MINSCAN<sup>®</sup> and HOTCRETE<sup>®</sup> application systems; and EMforce<sup>®</sup>, Optibloc<sup>®</sup> and Titanium Dioxide (TiO<sub>2</sub>) extenders for the Processed Minerals and Specialty PCC product lines.

Under the FulFill<sup>™</sup> platform of products, the Company continues to develop its filler-fiber composite material. The FulFill<sup>™</sup> brand High Filler Technology is a portfolio of high-filler technologies that offers papermakers a variety of efficient, flexible solutions that decreases dependency on natural fiber and reduces costs. The FulFill<sup>™</sup> E-325 series allows papermakers to increase filler loading levels of precipitated calcium carbonate (PCC), which replaces higher cost pulp, and increases PCC usage. Depending on paper grades, this PCC volume increase may range from 15 to 30 percent. The Company continues to progress in the commercialization of FulFill<sup>™</sup> E-325. We have signed agreements with eleven paper mills and are actively engaged with additional paper mill sites for further FulFill<sup>™</sup> deployment. We continue product development with other products within this platform.

The Company will also continue to reformulate its refractory materials to be more competitive, and will also continue development of unique calcium carbonates for use in novel biopolymers.

For the years ended December 31, 2012, 2011 and 2010, the Company spent approximately \$20.2 million, \$19.3 million and \$19.6 million, respectively, on research and development. The Company's research and development spending for 2012, 2011 and 2010 was approximately 2.0%, 1.9% and 2.0% of net sales, respectively.

The Company maintains its primary research facilities in Bethlehem and Easton, Pennsylvania. It also has research and development facilities in China, Germany, Ireland, Japan and Turkey. Approximately 79 employees worldwide are engaged in research and development. In addition, the Company has access to some of the world's most advanced papermaking and paper coating pilot facilities.

## **Patents and Trademarks**

The Company owns or has the right to use approximately 248 patents and approximately 875 trademarks related to its business. Our patents expire between 2013 and 2031. Our trademarks continue indefinitely. The Company believes that its rights under its existing patents, patent applications and trademarks are of value to its operations, but no one patent, application or trademark is material to the conduct of the Company's business as a whole.

## **Insurance**

The Company maintains liability and property insurance and insurance for business interruption in the event of damage to its production facilities and certain other insurance covering risks associated with its business. The Company believes such insurance is adequate for the operation of its business. There is no assurance that in the future the Company will be able to maintain the coverage currently in place or that the premiums will not increase substantially.

## Employees

At December 31, 2012, the Company employed 1,992 persons, of whom 999 were employed outside of the United States.

## Environmental, Health and Safety Matters

The Company's operations are subject to federal, state, local and foreign laws and regulations relating to the environment and health and safety. Certain of the Company's operations involve and have involved the use and release of substances that have been and are classified as toxic or hazardous within the meaning of these laws and regulations. Environmental operating permits are, or may be, required for certain of the Company's operations and such permits are subject to modification, renewal and revocation. The Company regularly monitors and reviews its operations, procedures and policies for compliance with these laws and regulations. The Company believes its operations are in substantial compliance with these laws and regulations and that there are no violations that would have a material effect on the Company. Despite these compliance efforts, some risk of environmental and other damage is inherent in the Company's operations, as it is with other companies engaged in similar businesses, and there can be no assurance that material violations will not occur in the future. The cost of compliance with these laws and regulations is not expected to have a material adverse effect on the Company.

Laws and regulations are subject to change. See Item 1A, Risk Factors, for information regarding the possible effects that compliance with new environmental laws and regulations, including those relating to climate change, may have on our businesses and operating results.

Under the terms of certain agreements entered into in connection with the Company's initial public offering in 1992, Pfizer Inc ("Pfizer") and its wholly-owned subsidiary Quigley Company, Inc. ("Quigley") agreed to indemnify the Company against certain liabilities being retained by Pfizer and its subsidiaries including, but not limited to, pending lawsuits and claims, and any lawsuits or claims brought at any time in the future alleging damages or injury from the use, handling of or exposure to any product sold by Pfizer's specialty minerals business prior to the closing of the initial public offering.

## Available Information

The Company maintains an internet website located at <http://www.mineralstech.com>. Its reports on Forms 10-K, 10-Q and 8-K, and amendments to those reports, as well as its Proxy Statement and filings under Section 16 of the Securities Exchange Act of 1934 are available free of charge through the Investor Relations page of its website, as soon as reasonably practicable after they are filed with the Securities and Exchange Commission ("SEC"). Investors may access these reports through the Company's website by navigating to "Investor Relations" and then to "SEC Filings."

Financial information concerning our business segments and the geographical areas in which we operate appears in the Notes to the Consolidated Financial Statements. Information related to our executive officers is included in Item 10, "Directors, Executive Officers and Corporate Governance."

## Item 1A. Risk Factors

Our business faces significant risks. These risks include those described below and may include additional risks and uncertainties not presently known to us. Our business, financial condition and results of operations could be materially adversely affected by any of these risks. These risks should be read in conjunction with the other information in this Annual Report on Form 10-K.

- ***Worldwide general economic, business, and industry conditions have had, and may continue to have, an adverse effect on the Company's results.***

The global economic instability of the past few years has caused, among other things, declining consumer and business confidence, volatile raw material prices, instability in credit markets, high unemployment, fluctuating interest and exchange rates, and other challenges. The Company's business and operating results have been and may continue to be adversely affected by these global economic conditions. In particular, our operations in Europe continue to be impacted by the uncertain European economy. A currency or financial crisis in Europe could precipitate a significant decline in the European economy, which would likely result in a decrease in demand for our products in Europe. The Company's customers and potential customers may experience deterioration of their businesses, cash flow shortages, and difficulty obtaining financing. As discussed below, the industries we serve, primarily paper, steel, construction and automotive, have been particularly adversely affected by the uncertain global economic climate due to the cyclical nature of their businesses. As a result, existing or potential customers may reduce or delay their growth and investments and their plans to purchase products, and may not be able to fulfill their obligations in a timely fashion. Further, suppliers could experience similar conditions, which could affect their ability to fulfill their obligations to the Company. Adversity within capital markets may also impact the Company's results of operations by negatively affecting the amount of expense the Company records for its pension and other postretirement benefit plans. Actuarial valuations used to calculate income or expense for the plans reflect assumptions about financial market and other economic conditions – the most significant of which are the discount rate and the expected long-term rate of return on plan assets. Such actuarial valuations may



change based on changes in key economic indicators. Global economic markets remain uncertain, and there can be no assurance that market conditions will improve in the near future. Future weakness in the global economy could materially and adversely affect our business and operating results.

- ***The Company's operations are subject to the cyclical nature of its customers' businesses and we may not be able to mitigate that risk.***

The majority of the Company's sales are to customers in industries that have historically been cyclical: paper, steel, construction, and automotive. These industries have been particularly adversely affected by the uncertain global economic climate. Our Refractories segment primarily serves the steel industry. In 2012, North American and European steel production was approximately 15% below 2008 levels due to reduced demand and several steel mill closures. In the paper industry, which is served by our Paper PCC product line, production levels for uncoated freesheet within North America and Europe, our two largest markets remain approximately 16% below 2008 levels. The reduced demand for paper industry products has also caused the paper industry to experience a number of recent bankruptcies and paper mill closures, including among our customers. In addition, our Processed Minerals and Specialty PCC product lines are affected by the domestic building and construction markets and the automotive market. Housing starts in 2012 averaged approximately 780 thousand units. Housing starts were at a peak rate of 2.1 million units in 2005. Demand for our products is subject to these trends. In addition, these trends could cause our customers to face liquidity issues or bankruptcy, which could deteriorate the aging of our accounts receivable, increase our bad debt exposure and possibly trigger impairment of assets or realignment of our businesses. The Company has taken steps to reduce its exposure to variations in its customers' businesses, including by diversifying its portfolio of products and services; through geographic expansion, and by structuring most of its long-term satellite PCC contracts to provide a degree of protection against declines in the quantity of product purchased, since the price per ton of PCC generally rises as the number of tons purchased declines. In addition, many of the Company's product lines lower its customers' costs of production or increase their productivity, which should encourage them to use its products. However, there can be no assurance that these efforts will mitigate the risks of our dependence on these industries. Continued weakness in the industries we serve has had, and may in the future have, an adverse effect on sales of our products and our results of operations. A continued or renewed economic downturn in one or more of the industries or geographic regions that the Company serves, or in the worldwide economy, could cause actual results of operations to differ materially from historical and expected results.

- ***The Company's results could be adversely affected if it is unable to effectively achieve and implement its growth initiatives.***

Sales and income growth of the Company depends upon a number of uncertain events, including the outcome of the Company's strategies of increasing its penetration into geographic markets such as the BRIC (Brazil, Russia, India, China) countries and other Asian and Eastern European countries; increasing its penetration into product markets such as the market for papercoating pigments and the market for groundwood paper pigments; increasing sales to existing PCC customers by increasing the amount of PCC used per ton of paper produced; developing, introducing and selling new products such as the FulFill™ family of products for the paper industry. Difficulties, delays or failure of any of these strategies could affect the future growth rate of the Company. Our strategy also anticipates growth through future acquisitions. However, our ability to identify and consummate any future acquisitions on terms that are favorable to us may be limited by the number of attractive acquisition targets, internal demands on our resources and our ability to obtain financing. Our success in integrating newly acquired businesses will depend upon our ability to retain key personnel, avoid diversion of management's attention from operational matters, and integrate general and administrative services. In addition, future acquisitions could result in the incurrence of additional debt, costs and contingent liabilities. Integration of acquired operations may take longer, or be more costly or disruptive to our business, than originally anticipated, and it is also possible that expected synergies from future acquisitions may not materialize. We also may incur costs and divert management attention with regard to potential acquisitions that are never consummated.

- ***The Company's sales of PCC could be adversely affected by our failure to renew or extend long term sales contracts for our satellite operations.***

The Company's sales of PCC to paper customers are typically pursuant to long-term evergreen agreements, initially ten years in length, with paper mills where the Company operates satellite PCC plants. Sales pursuant to these contracts represent a significant portion of our worldwide Paper PCC sales, which were \$480.3 million in 2012, or approximately 48% of the Company's net sales. The terms of many of these agreements have been extended or renewed in the past, often in connection with an expansion of the satellite plant. However, failure of a number of the Company's customers to renew or extend existing agreements on terms as favorable to the Company as those currently in effect, or at all, could have a substantial adverse effect on the Company's results of operations, and could also result in impairment of the assets associated with the PCC plant.

- ***The Company's sales could be adversely affected by consolidation in customer industries, principally paper and steel.***

Several consolidations in the paper industry have taken place in recent years and such consolidation could continue in the future. These consolidations could result in partial or total closure of some paper mills where the Company operates PCC satellites. In 2011, the Company idled its satellite plant in Anjalankoski, Finland, due to the permanent closure of the paper mill, and the Company's satellite plant in Alizay, France, is temporarily closed. Such closures would reduce the Company's sales of PCC, except to the extent that they resulted in shifting paper production and associated purchases of PCC to another location served by

the Company. Similarly, consolidations have occurred in the steel industry. Such consolidations in the two major industries we serve concentrate purchasing power in the hands of a smaller number of papermakers and steel manufacturers, enabling them to increase pressure on suppliers, such as the Company. This increased pressure could have an adverse effect on the Company's results of operations in the future.

● ***The Company is subject to stringent regulation in the areas of environmental, health and safety, and tax, and may incur unanticipated costs or liabilities arising out of claims for various legal, environmental and tax matters or product stewardship issues.***

The Company's operations are subject to international, federal, state and local governmental environmental, health and safety, tax and other laws and regulations. We have expended, and may be required to expend in the future, substantial funds for compliance with such laws and regulations. In addition, future events, such as changes to or modifications of interpretations of existing laws and regulations, or enforcement policies, or further investigation or evaluation of the potential environmental impacts of operations or health hazards of certain products, may give rise to additional compliance and other costs that could have a material adverse effect on the Company. State, national, and international governments and agencies have been evaluating climate-related legislation and regulation that would restrict emissions of greenhouse gases in areas in which we conduct business, and some such legislation and regulation have already been enacted or adopted. Enactment of climate-related legislation or adoption of regulation that restrict emissions of greenhouse gases in areas in which we conduct business could have an adverse effect on our operations or demand for our products. Our manufacturing processes, particularly the manufacturing process for PCC, use a significant amount of energy and, should energy prices increase as a result of such legislation or regulation, we may not be able to pass these increased costs on to purchasers of our products. We cannot predict if or when currently proposed or additional laws and regulations regarding climate change or other environmental or health and safety concerns will be enacted or adopted. Moreover, changes in tax regulation and international tax treaties could reduce the financial performance of our foreign operations.

The Company is currently a party in various litigation matters and tax and environmental proceedings and faces risks arising from various unasserted litigation matters, including, but not limited to, product liability, patent infringement, antitrust claims, and claims for third party property damage or personal injury stemming from alleged environmental torts. Failure to appropriately manage safety, human health, product liability and environmental risks associated with the Company's products and production processes could adversely impact the Company's employees and other stakeholders, the Company's reputation and its results of operations. Public perception of the risks associated with the Company's products and production processes could impact product acceptance and influence the regulatory environment in which the Company operates. While the Company has procedures and controls to manage these risks, carries liability insurance, which it believes to be appropriate to its businesses, and has provided reserves for current matters, which it believes to be adequate, an unanticipated liability, arising out of a current matter or proceeding or from the other risks described above, could have a material adverse effect on the Company's financial condition or results of operations.

● ***Delays or failures in new product development could adversely affect the Company's operations.***

The Company's future business success will depend in part upon its ability to maintain and enhance its technological capabilities, to respond to changing customer needs, and to successfully anticipate or respond to technological changes on a cost-effective and timely basis. The Company is engaged in a continuous effort to develop new products and processes in all of its product lines. Difficulties, delays or failures in the development, testing, production, marketing or sale of such new products could cause actual results of operations to differ materially from our expected results.

● ***The Company's ability to compete is dependent upon its ability to defend its intellectual property against inappropriate disclosure and infringement.***

The Company's ability to compete is based in part upon proprietary knowledge, both patented and unpatented. The Company's ability to achieve anticipated results depends in part on its ability to defend its intellectual property against inappropriate disclosure as well as against infringement. In addition, development by the Company's competitors of new products or technologies that are more effective or less expensive than those the Company offers could have a material adverse effect on the Company's financial condition or results of operations.

● ***The Company's operations could be impacted by the increased risks of doing business abroad.***

The Company does business in many areas internationally. Approximately 44% of our sales in 2012 were derived from outside the United States and we have significant production facilities which are located outside of the United States. We continue to be concerned about the possibility of recessionary conditions in Europe, from which we derived approximately 25% of our sales in 2012. Our sales in Europe decreased from \$298.4 million in 2011 to \$257.0 million in 2012, and continued weakness in the European market may negatively affect our sales in the future. We have in recent years expanded our operations in emerging markets, and we plan to continue to do so in the future, particularly in China, India, Brazil, and Eastern Europe. Some of our operations are located in areas that have experienced political or economic instability, including Indonesia, Brazil, Thailand, China and South Africa. As the Company expands its operations overseas, it faces increased risks of doing business abroad, including inflation, fluctuation in interest rates, changes in applicable laws and regulatory requirements, export and import restrictions,

tariffs, nationalization, expropriation, limits on repatriation of funds, civil unrest, terrorism, unstable governments and legal systems, and other factors. Adverse developments in any of the areas in which we do business could cause actual results to differ materially from historical and expected results. In addition, a significant portion of our raw material purchases and sales outside the United States are denominated in foreign currencies, and liabilities for non-U.S. operating expenses and income taxes are denominated in local currencies. Accordingly, reported sales, net earnings, cash flows and fair values have been and in the future will be affected by changes in foreign currency exchange rates. Our overall success as a global business depends, in part, upon our ability to succeed in differing legal, regulatory, economic, social and political conditions. We cannot assure you that we will implement policies and strategies that will be effective in each location where we do business.

● ***The Company's operations are dependent on the availability of raw materials and increases in costs of raw materials or energy could adversely affect our financial results.***

The Company depends in part on having an adequate supply of raw materials for its manufacturing operations, particularly lime and carbon dioxide for the PCC product line, and magnesia and alumina for its Refractory operations. Purchase prices and availability of these critical raw materials are subject to volatility. At any given time, we may be unable to obtain an adequate supply of these critical raw materials on a timely basis, on price and other terms, or at all. While most such raw materials are readily available, the Company purchases a portion of its magnesia requirements from sources in China.

The price and availability of magnesia have fluctuated in the past and they may fluctuate in the future. Price increases for certain other of our raw materials, as well as increases in energy prices, have also affected our business. Our ability to recover increased costs is uncertain. The Company and its customers will typically negotiate reasonable price adjustments in order to recover a portion of these rapidly escalating costs. While the contracts pursuant to which we construct and operate our satellite PCC plants generally adjust pricing to reflect increases in costs resulting from inflation, there is a time lag before such price adjustments can be implemented. In 2012, increased raw materials affected our Specialty Minerals segment by \$12 million. These increased raw material costs were partially offset by price increases.

The Company also depends on having adequate access to ore reserves of appropriate quality at its mining operations. There are numerous uncertainties inherent in estimating ore reserves including subjective judgments and determinations that are based on available geological, technical, contract and economic information.

We cannot predict whether, and how much, prices for our key raw materials will increase in the future. Changes in the costs or availability of such raw materials, to the extent we cannot recover them in price increases to our customers, could adversely affect the Company's results of operations.

● ***The Company operates in very competitive industries, which could adversely affect our profitability.***

The Company has many competitors. Some of our principal competitors have greater financial and other resources than we have. Accordingly, these competitors may be better able to withstand changes in conditions within the industries in which we operate and may have significantly greater operating and financial flexibility than we do. As a result of the competitive environment in the markets in which we operate, we currently face and will continue to face pressure on the sales prices of our products from competitors, which could reduce profit margins.

● ***Production facilities are subject to operating risks and capacity limitations that may adversely affect the Company's financial condition or results of operations.***

The Company is dependent on the continued operation of its production facilities. Production facilities are subject to hazards associated with the manufacturing, handling, storage, and transportation of chemical materials and products, including pipeline leaks and ruptures, explosions, fires, inclement weather and natural disasters, mechanical failure, unscheduled downtime, labor difficulties, transportation interruptions, and environmental risks. We maintain property, business interruption and casualty insurance but such insurance may not cover all risks associated with the hazards of our business and is subject to limitations, including deductibles and maximum liabilities covered. We may incur losses beyond the limits, or outside the coverage, of our insurance policies. Further, from time to time, we may experience capacity limitations in our manufacturing operations. In addition, if we are unable to effectively forecast our customers' demand, it could affect our ability to successfully manage operating capacity limitations. These hazards, limitations, disruptions in supply and capacity constraints could adversely affect financial results.

## **Item 1B. Unresolved Staff Comments**

None.

## **Item 2. Properties**

Set forth below is the location of, and the main customer served by, each of the Company's satellite PCC plants in operation as of December 31, 2012. Generally, the land on which each satellite PCC plant is located is leased at a nominal amount by the Company

from the host paper mill pursuant to a lease, the term of which generally runs concurrently with the term of the PCC production and sale agreement between the Company and the host paper mill.

<u>Location</u>	<u>United States</u>	<u>Principal Customer</u>
Alabama, Courtland		International Paper Company
Alabama, Jackson		Boise Inc.
Alabama, Selma		International Paper Company
Arkansas, Ashdown		Domtar Inc.
Florida, Pensacola		Georgia-Pacific Corporation (Koch Industries)
Kentucky, Wickliffe		NewPage Corporation
Louisiana, Port Hudson		Georgia-Pacific Corporation (Koch Industries)
Maine, Jay		Verso Paper Holdings LLC
Maine, Madison		Madison Paper Industries
Michigan, Quinnesec		Verso Paper Holdings LLC
Minnesota, Cloquet		Sappi Ltd.
Minnesota, International Falls		Boise Inc.
New York, Ticonderoga		International Paper Company
Ohio, Chillicothe		P.H. Glatfelter Co.
Ohio, West Carrollton		Appleton Papers Inc.
South Carolina, Eastover		International Paper Company
Washington, Camas		Georgia-Pacific Corporation (Koch Industries)
Washington, Longview		North Pacific Paper Corporation
Washington, Wallula		Boise Inc.
Wisconsin, Kimberly		Appleton Coated
Wisconsin, Park Falls		Flambeau River Papers LLC
Wisconsin, Superior		New Page Corporation
Wisconsin, Wisconsin Rapids		New Page Corporation

<u>Location</u>	<u>International</u>	<u>Principal Customer</u>
Brazil, Guaiba		Aracruz Celulose S.A.
Brazil, Jacarei		Ahlstrom-VCP Industria de Papeis Especialis Ltda.
Brazil, Luiz Antonio		International Paper do Brasil Ltda.
Brazil, Mucuri		Suzano Papel e Celulose S. A.
Brazil, Suzano		Suzano Papel e Celulose S. A.
Canada, St. Jerome, Quebec		Cascades Fine Papers Group Inc.
Canada, Windsor, Quebec		Domtar Inc.
China, Dagang <sup>1</sup>		Gold East Paper (Jiangsu) Company Ltd.
China, Zhenjiang <sup>1</sup>		Gold East Paper (Jiangsu) Company Ltd.
China, Suzhou <sup>1</sup>		Gold HuaSheng Paper Company Ltd.
Finland, Äänekoski		M-real Corporation
Finland, Tervakoski		Trierenberg Holding
France, Alizay <sup>2</sup>		Double A Paper Company Ltd.
France, Docelles		UPM Corporation
France, Saillat Sur Vienne		International Paper Company
Germany, Schongau		UPM Corporation
India, Ballarshah <sup>1</sup>		Ballarpur Industries Ltd.
India, Dandeli		West Coast Paper Mill Ltd.
India, Gaganapur <sup>1</sup>		Ballarpur Industries Ltd.
India, Saila Khurd		ABC Paper Ltd.
India, Rayagada <sup>1,3</sup>		JK Paper
Indonesia, Perawang <sup>1</sup>		PT Indah Kiat Pulp and Paper Corporation
Japan, Shiraoi <sup>1</sup>		Nippon Paper Group Inc.
Malaysia, Sipitang		Ballarpur Industries Ltd.
Mexico, Anahuac		Copamex, S.A. de C.V.
Poland, Kwidzyn		International Paper – Kwidzyn, S.A
Portugal, Figueira da Foz <sup>1</sup>		Soporcel – Sociedade Portuguesa de Papel, S.A.
Slovakia, Ruzomberok		Mondi Business Paper SCP
South Africa, Merebank <sup>1</sup>		Mondi Paper Company Ltd.
Thailand, Namphong		Phoenix Pulp & Paper Public Co. Ltd.
Thailand, Tha Toom <sup>1</sup>		Double A Paper Company Ltd.
Thailand, Tha Toom <sup>21,3</sup>		Double A Paper Company Ltd.

<sup>1</sup> These plants are owned through joint ventures.

<sup>2</sup> This plant is temporarily idled. The mill was sold to Double A Paper Company Ltd. in 2013. The Company is currently negotiating a contract with this customer.

<sup>3</sup> These plants are under construction.

The Company also owned and operated at December 31, 2012, 8 plants engaged in the mining, processing and/or production of lime, limestone, precipitated calcium carbonate and talc, as well as owned or leased and operated 18 manufacturing facilities worldwide within the Refractories segment. The Company's corporate headquarters, sales offices, research laboratories, plants and other facilities are owned by the Company except as otherwise noted. Set forth below is certain information relating to the Company's plants and office and research facilities:

<u>Location</u>	<u>Facility</u>	<u>Product Line</u>
<b>United States</b>		
Arizona, Pima County	Plant; Quarry <sup>1</sup>	Limestone
California, Lucerne Valley	Plant; Quarry	Limestone
Connecticut, Canaan	Plant; Quarry	Limestone, Metallurgical Wire/Calcium
Indiana, Portage	Plant	Refractories/Shapes
Louisiana, Baton Rouge	Plant	Monolithic Refractories
Massachusetts, Adams	Plant; Quarry	Limestone, Lime, PCC
Montana, Dillon	Plant; Quarry	Talc
New York, New York	Headquarters <sup>2</sup>	All Company Products
Ohio, Bryan	Plant	Monolithic Refractories
Ohio, Dover	Plant	Monolithic Refractories/Shapes
Pennsylvania, Bethlehem	Administrative Office; Research laboratories; Sales Offices	All Company Products
Pennsylvania, Easton	Administrative Office; Research laboratories; Plant; Sales Offices	All Company Products
Pennsylvania, Slippery Rock	Plant; Sales Offices	Monolithic Refractories/Shapes
Texas, Bay City	Plant	Talc
<b>International</b>		
Australia, Carlingford	Sales Office <sup>2</sup>	Monolithic Refractories
Belgium, Brussels	Sales Office <sup>2</sup> /Administrative Office	Monolithic Refractories/PCC
Brazil, Sao Jose dos Campos	Sales Office <sup>2</sup> /Administrative Office	PCC
Canada, Pt. Claire	Administrative Office	PCC/Monolithic Refractories
China, Shanghai	Administrative Office/Sales Office	PCC/Monolithic Refractories
China, Suzhou	Plant/Sales Office/Research laboratories	PCC/Monolithic Refractories
Finland, Kaarina	Administrative Office <sup>2</sup>	PCC
Germany, Duisburg	Plant/Sales Office/Research laboratories	Laser Scanning Instrumentation/ Probes/Monolithic Refractories
Germany, Walsum	Plant	PCC
Holland, Hengelo	Plant/Sales Office	Metallurgical Wire
India, Mumbai	Sales Office <sup>2</sup> /Administrative Office	PCC/Monolithic Refractories/ Metallurgical Wire
Ireland, Cork	Plant; Administrative Office <sup>2</sup> / Research laboratories	Monolithic Refractories
Italy, Brescia	Sales Office	Monolithic Refractories/Shapes
Italy, Nave	Plant	Monolithic Refractories/Shapes
Japan, Gamagori	Plant/Research laboratories	Monolithic Refractories/Shapes, Calcium
Japan, Tokyo	Sales Office	Monolithic Refractories
Singapore	Sales Office <sup>2</sup> /Administrative Office	PCC
Spain, Santander	Sales Office <sup>2</sup> /Administrative Office	Monolithic Refractories
South Africa, Pietermaritzburg	Plant	Monolithic Refractories
South Africa, Johannesburg	Sales Office/Administrative Office <sup>2</sup>	Monolithic Refractories
Turkey, Gebze a	Plant/Research Laboratories	Monolithic Refractories/Shapes/ Application Equipment
Turkey, Istanbul	Sales Office/Administrative Office	Monolithic Refractories
Turkey, Kutahya	Plant	Monolithic Refractories/Shapes
United Kingdom, Lifford	Plant	PCC, Lime

<sup>1</sup> This plant and quarry is leased to another company.

<sup>2</sup> Leased by the Company. The facilities in Cork, Ireland, are operated pursuant to a 99-year lease, the term of which commenced in 1963. The Company's headquarters in New York, New York, are held under a lease which expires in 2021.

The following sets forth, for each of the quarries or mines we own or operate, as set forth above, our current estimate as to the amount of reserves such quarry or mine holds, based on the most recent mine plan, and its usage rate in 2012.

**Millions of tons**

<b>Location</b>	<b>Reserves</b>	<b>2012 Usage</b>
Arizona, Pima County	8.90	0.11
California, Lucerne Valley	47.94	0.79
Connecticut, Canaan	20.87	0.50
Massachusetts, Adams	26.16	0.60
Montana, Dillon	3.56	0.18

The Company believes that its facilities, which are of varying ages and are of different construction types, have been satisfactorily maintained, are in good condition, are suitable for the Company's operations and generally provide sufficient capacity to meet the Company's production requirements. Based on past loss experience, the Company believes it is adequately insured with respect to these assets and for liabilities likely to arise from its operations.

**Item 3. Legal Proceedings**

Certain of the Company's subsidiaries are among numerous defendants in a number of cases seeking damages for exposure to silica or to asbestos containing materials. The Company currently has 72 pending silica cases and 7 pending asbestos cases. To date, 1,394 silica cases and 32 asbestos cases have been dismissed. No new asbestos cases were filed in the fourth quarter of 2012, and twenty-two were dismissed. Most of these claims do not provide adequate information to assess their merits, the likelihood that the Company will be found liable, or the magnitude of such liability, if any. Additional claims of this nature may be made against the Company or its subsidiaries. At this time management anticipates that the amount of the Company's liability, if any, and the cost of defending such claims, will not have a material effect on its financial position or results of operations.

The Company has not settled any silica or asbestos lawsuits to date. We are unable to state an amount or range of amounts claimed in any of the lawsuits because state court pleading practices do not require identifying the amount of the claimed damage. The aggregate cost to the Company for the legal defense of these cases since inception was approximately \$0.2 million, the majority of which has been reimbursed by Pfizer Inc pursuant to the terms of certain agreements entered into in connection with the Company's initial public offering in 1992. Of the 7 pending asbestos cases, all allege liability based on products sold mostly or entirely prior to the initial public offering, and for which the Company is therefore entitled to indemnification pursuant to such agreements. Our experience has been that the Company is not liable to plaintiffs in any of these lawsuits and the Company does not expect to pay any settlements or jury verdicts in these lawsuits.

*Environmental Matters*

On April 9, 2003, the Connecticut Department of Environmental Protection issued an administrative consent order relating to our Canaan, Connecticut, plant where both our Refractories segment and Specialty Minerals segment have operations. We agreed to the order, which includes provisions requiring investigation and remediation of contamination associated with historic use of polychlorinated biphenyls ("PCBs") and mercury at a portion of the site. We have completed the required investigations and submitted several reports characterizing the contamination. We are now conducting a site-specific risk assessment required by the regulators.

We believe that the most likely form of overall site remediation will be to leave the existing contamination in place (with some limited soil removal), encapsulate it, and monitor the effectiveness of the encapsulation. We anticipate that a substantial portion of the remediation cost will be borne by the United States based on its involvement at the site from 1942 – 1964, as historic documentation indicates that PCBs and mercury were first used at the facility at a time of U.S. government ownership for production of materials needed by the military. Though the cost of the likely remediation remains uncertain pending completion of the phased remediation decision process, we have estimated that the Company's share of the cost of the encapsulation and limited soil removal described above would approximate \$0.4 million, which has been accrued as of December 31, 2012.

The Company is evaluating options for upgrading the wastewater treatment facilities at its Adams, Massachusetts plant. This work has been undertaken pursuant to an administrative Consent Order originally issued by the Massachusetts Department of Environmental Protection ("DEP") on June 18, 2002. This order was amended on June 1, 2009 and on June 2, 2010. The amended Order includes the investigation by January 1, 2022 of options for ensuring that the facility's wastewater treatment ponds will not result in unpermitted discharge to groundwater. Additional requirements of the amendment include the submittal by July 1, 2022 of a plan for closure of a historic lime solids disposal area. Preliminary engineering reviews completed in 2005 indicate that the estimated cost of wastewater treatment upgrades to operate this facility beyond 2024 may be between \$6 million and \$8 million. The Company estimates that the remaining remediation costs would approximate \$0.4 million, which has been accrued as of December 31, 2012.

The Company and its subsidiaries are not party to any other material pending legal proceedings, other than routine litigation incidental to their businesses.

#### Item 4. Mine Safety Disclosures

The information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K is included in Exhibit 95 to this Annual Report on Form 10-K.

#### PART II

#### Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Securities

The Company's common stock is traded on the New York Stock Exchange under the symbol "MTX."

Information on market prices and dividends is set forth below. On December 11, 2012, the Company effected a two-for-one stock split in the form of a stock dividend. Accordingly, all share and per share data presented reflects the effect of the stock split. See Note 1 to the consolidated financial statements "Summary of Significant Accounting Policies," for additional information.

<b>2012 Quarters</b>	<b>First</b>	<b>Second</b>	<b>Third</b>	<b>Fourth</b>
Market Price Range Per Share of Common Stock				
High	\$ 33.96	\$ 33.60	\$ 36.99	\$ 39.92
Low	28.78	30.81	30.50	34.25
Close	32.70	31.89	35.46	39.92
Dividends paid per common share	\$ 0.025	\$ 0.025	\$ 0.025	\$ 0.05

<b>2011 Quarters</b>	<b>First</b>	<b>Second</b>	<b>Third</b>	<b>Fourth</b>
Market Price Range Per Share of Common Stock				
High	\$ 34.36	\$ 35.04	\$ 34.31	\$ 29.00
Low	31.23	31.50	24.63	23.37
Close	34.36	33.83	24.63	28.26
Dividends paid per common share	\$ 0.025	\$ 0.025	\$ 0.025	\$ 0.025

#### Equity Compensation Plan Information

<b>Plan Category</b>	<b>Number of securities to be issued upon exercise of outstanding options</b>	<b>Weighted average exercise price of outstanding options</b>	<b>Number of securities remaining available for future issuance</b>
Equity compensation plans approved by security holders <sup>1</sup>	1,395,520	\$ 28.31	1,491,974
Total	1,395,520	\$ 28.31	1,491,974

<sup>1</sup> The Company's only equity compensation plan has been approved by the Company's stockholders.

#### Issuer Purchases of Equity Securities

<b>Period</b>	<b>Total Number of Shares Purchased</b>	<b>Average Price Paid Per Share</b>	<b>Total Number of Shares Purchased as Part of the Publicly Announced Program</b>	<b>Dollar Value of Shares That May Yet be Purchased Under the Program</b>
October 1 – October 28	7,400	\$ 35.00 *	204,715	62,776,742
October 29 – November 19	69,360	\$ 35.00 *	274,075	57,921,378
November 20 – November 25	69,600	\$ 35.81	343,675	55,429,131
November 26 - December 31	289,900	\$ 38.22	633,575	44,349,140
Total	436,260	\$ 36.93 *		

\* Share prices have been retrospectively adjusted for all periods presented for the two-for-one stock split on December 11, 2012. See Note 1 to the consolidated financial statements, "Summary of Significant Accounting Policies", for additional information.





In 2011, the Company's Board of Directors authorized the Company's management to repurchase, at its discretion, up to \$75 million of additional shares over a two-year period. As of December 31, 2012, 633,575 shares have been repurchased under this program for \$30.7 million, or an average price of approximately \$48.38 per share.

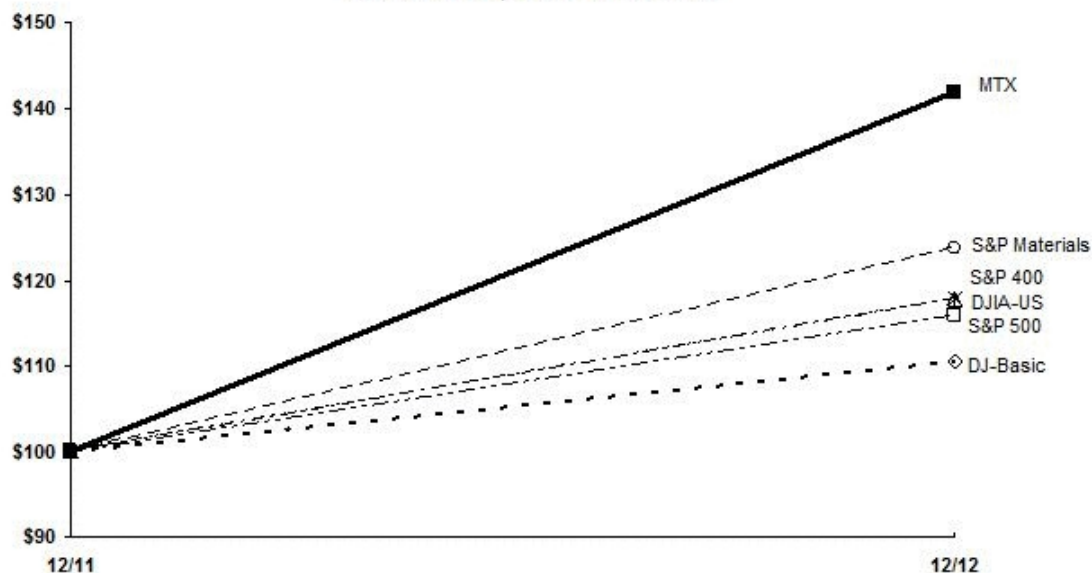
On January 23, 2013, the Company's Board of Directors declared a regular quarterly dividend on its common stock of \$0.05 per share. No dividend will be payable unless declared by the Board and unless funds are legally available for payment thereof.

On February 8, 2013, the last reported sales price on the NYSE was \$42.12 per share. As of February 8, 2013, there were approximately 171 holders of record of the common stock.

The graph below compares Minerals Technologies Inc.'s cumulative 1-year total shareholder return on common stock with the cumulative total returns of the S&P 500 index, the Dow Jones US Industrials index, the S&P Midcap 400 index, the Dow Jones US Basic Materials index, and the S&P MidCap 400 Materials Sector. The graph tracks the performance of a \$100 investment in our common stock and in each index (with the reinvestment of all dividends) from 12/31/2011 to 12/31/2012.

### COMPARISON OF 1 YEAR CUMULATIVE TOTAL RETURN\*

Among Minerals Technologies Inc., the S&P 500 Index, the S&P Midcap 400 Index, the Dow Jones US Industrials Index, the Dow Jones US Basic Materials Index, and S&P MidCap 400 Materials Sector



—■— Minerals Technologies Inc.  
 - - - Δ - - S&P Midcap 400  
 - - ◇ - - Dow Jones US Basic Materials  
 - - □ - - S&P 500  
 - - \* - - Dow Jones US Industrials  
 - - ○ - - S&P MidCap 400 Materials Sector

\*\$100 invested on 12/31/11 in stock or index, including reinvestment of dividends.  
Fiscal year ending December 31.

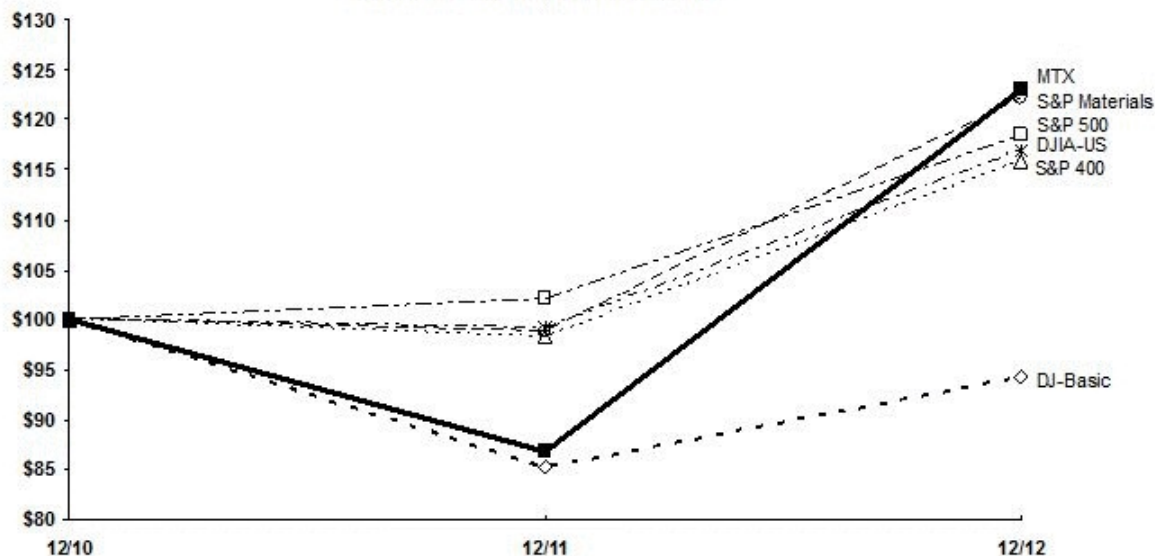
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	12/11	12/12
Minerals Technologies Inc.	100.00	141.93
S&P 500	100.00	116.00
S&P Midcap 400	100.00	117.88
Dow Jones US Industrials	100.00	117.87
Dow Jones US Basic Materials	100.00	110.49
S&P MidCap 400 Materials Sector	100.00	123.65

The graph below compares Minerals Technologies Inc.'s cumulative 2-year total shareholder return on common stock with the cumulative total returns of the S&P 500 index, the Dow Jones US Industrials index, the S&P Midcap 400 index, the Dow Jones US Basic Materials index, and the S&P MidCap 400 Materials Sector. The graph tracks the performance of a \$100 investment in our common stock and in each index (with the reinvestment of all dividends) from 12/31/2010 to 12/31/2012.

### COMPARISON OF 2 YEAR CUMULATIVE TOTAL RETURN\*

Among Minerals Technologies Inc., the S&P 500 Index, the S&P Midcap 400 Index, the Dow Jones US Industrials Index, the Dow Jones US Basic Materials Index, and S&P MidCap 400 Materials Sector



—■— Minerals Technologies Inc.  
 - - - Δ - - - S&P Midcap 400  
 - -◇- - Dow Jones US Basic Materials  
 - -□- - S&P 500  
 - - \* - - Dow Jones US Industrials  
 - -◇- - S&P MidCap 400 Materials Sector

\*\$100 invested on 12/31/10 in stock or index, including reinvestment of dividends.  
Fiscal year ending December 31.

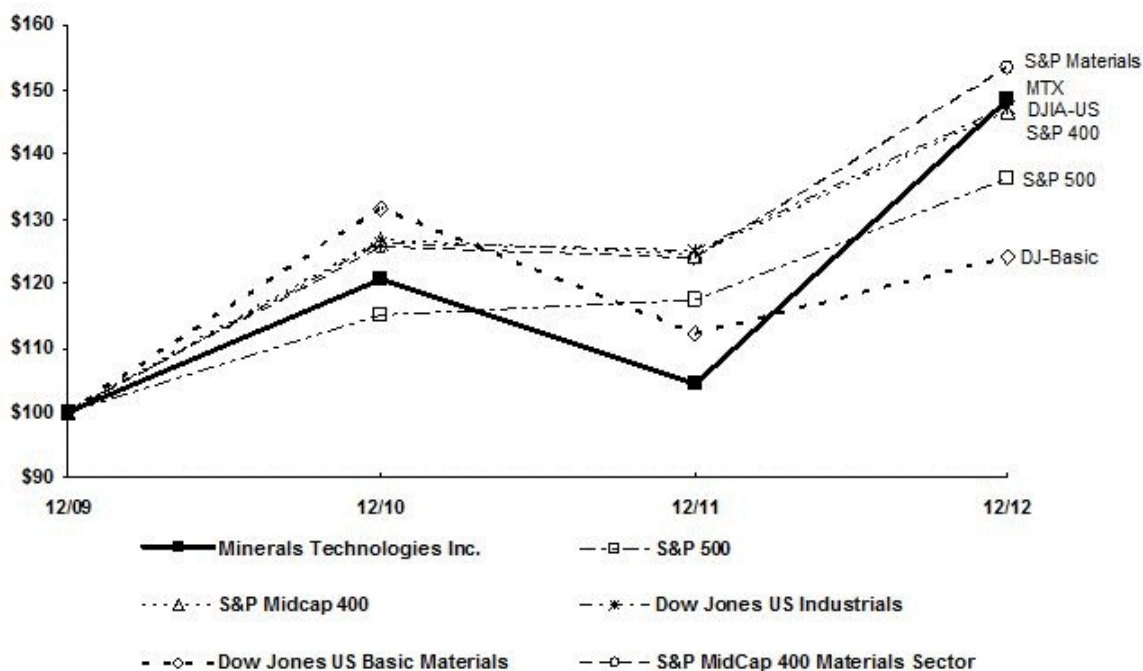
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	12/10	12/11	12/12
Minerals Technologies Inc.	100.00	86.71	123.06
S&P 500	100.00	102.11	118.45
S&P Midcap 400	100.00	98.27	115.84
Dow Jones US Industrials	100.00	99.21	116.94
Dow Jones US Basic Materials	100.00	85.28	94.23
S&P MidCap 400 Materials Sector	100.00	98.77	122.13

The graph below compares Minerals Technologies Inc.'s cumulative 3-year total shareholder return on common stock with the cumulative total returns of the S&P 500 index, the Dow Jones US Industrials index, the S&P Midcap 400 index, the Dow Jones US Basic Materials index, and the S&P MidCap 400 Materials Sector. The graph tracks the performance of a \$100 investment in our common stock and in each index (with the reinvestment of all dividends) from 12/31/2009 to 12/31/2012.

### COMPARISON OF 3 YEAR CUMULATIVE TOTAL RETURN\*

Among Minerals Technologies Inc., the S&P 500 Index, the S&P Midcap 400 Index, the Dow Jones US Industrials Index, the Dow Jones US Basic Materials Index, and S&P MidCap 400 Materials Sector



\*\$100 invested on 12/31/09 in stock or index, including reinvestment of dividends.  
Fiscal year ending December 31.

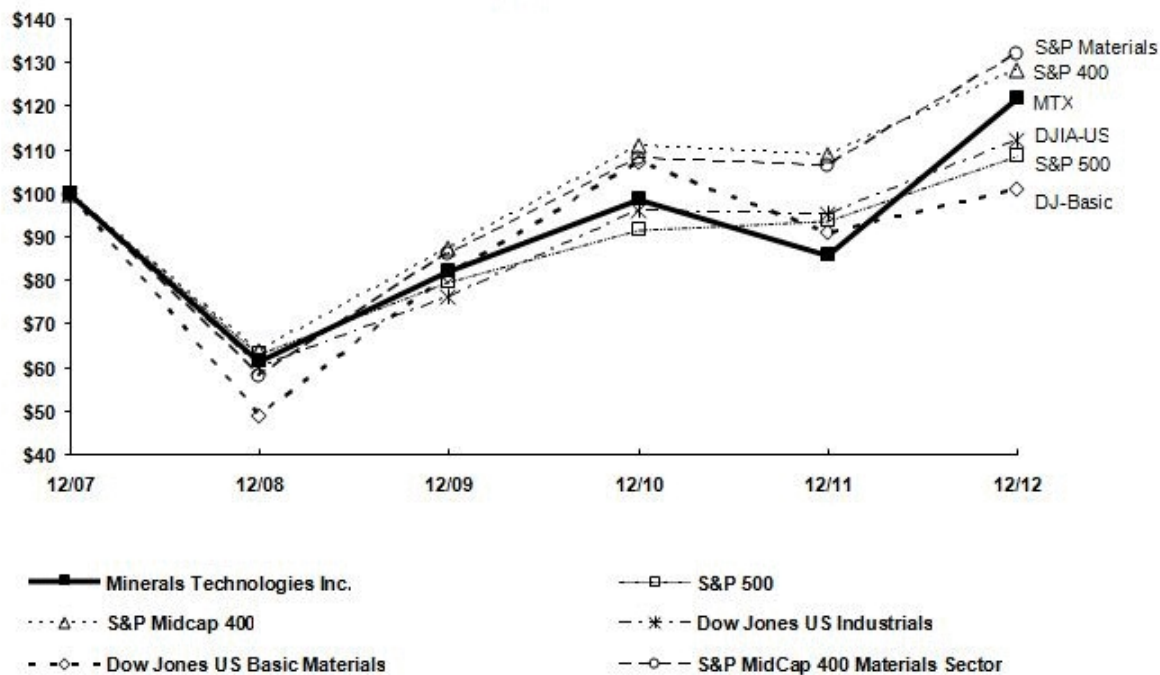
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	12/09	12/10	12/11	12/12
Minerals Technologies Inc.	100.00	120.53	104.51	148.33
S&P 500	100.00	115.06	117.49	136.30
S&P Midcap 400	100.00	126.64	124.45	146.69
Dow Jones US Industrials	100.00	126.02	125.03	147.37
Dow Jones US Basic Materials	100.00	131.73	112.34	124.12
S&P MidCap 400 Materials Sector	100.00	125.46	123.92	153.23

The graph below compares Minerals Technologies Inc.'s cumulative 5-year total shareholder return on common stock with the cumulative total returns of the S&P 500 index, the Dow Jones US Industrials index, the S&P Midcap 400 index, the Dow Jones US Basic Materials index, and the S&P MidCap 400 Materials Sector. The graph tracks the performance of a \$100 investment in our common stock and in each index (with the reinvestment of all dividends) from 12/31/2007 to 12/31/2012.

### COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN\*

Among Minerals Technologies Inc., the S&P 500 Index, the S&P Midcap 400 Index, the Dow Jones US Industrials Index, the Dow Jones US Basic Materials Index, and S&P MidCap 400 Materials Sector



\*\$100 invested on 12/31/07 in stock or index, including reinvestment of dividends.  
Fiscal year ending December 31

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	12/07	12/08	12/09	12/10	12/11	12/12
Minerals Technologies Inc.	100.00	61.28	82.02	98.86	85.72	121.66
S&P 500	100.00	63.00	79.67	91.67	93.61	108.59
S&P Midcap 400	100.00	63.77	87.61	110.94	109.02	128.51
Dow Jones US Industrials	100.00	60.45	76.21	96.05	95.29	112.32
Dow Jones US Basic Materials	100.00	49.18	81.40	107.23	91.45	101.04
S&P MidCap 400 Materials Sector	100.00	58.16	86.12	108.05	106.72	131.96

**Item 6. Selected Financial Data****Dollars in Millions, Except Per Share Data**

<b>Income Statement Data:</b>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>
Net sales	\$ 1,005.6	\$ 1,044.9	\$ 1,002.4	\$ 907.3	\$ 1,112.2
Cost of goods sold	786.2	832.7	793.2	751.5	891.7
Production margin	219.4	212.2	209.2	155.8	220.5
Marketing and administrative expenses	89.2	92.1	90.5	91.1	101.8
Research and development expenses	20.2	19.3	19.6	19.9	23.1
Impairment of assets	--	--	--	39.8	0.2
Restructuring and other costs	--	0.5	0.8	22.0	13.4
Income (loss) from operations	110.0	100.3	98.3	(17.0)	82.0
Non-operating income (deductions), net	(3.0)	(2.6)	0.6	(6.1)	0.3
Income (loss) from continuing operations before Provision (benefit) for taxes on income (loss)	107.0	97.7	98.9	(23.1)	82.3
Provision (benefit) for taxes on income (loss)	30.8	27.5	29.0	(5.4)	24.1
Income (loss) from continuing operations	76.2	70.2	69.9	(17.7)	58.2
Income (loss) from discontinued operations, net of tax	--	--	--	(3.2)	10.3
Consolidated net income (loss)	76.2	70.2	69.9	(20.9)	68.5
Less: Net income attributable to non-controlling interests	(2.1)	(2.7)	(3.0)	(2.9)	(3.2)
Net income (loss) attributable to Minerals Technologies Inc. (MTI)	\$ 74.1	\$ 67.5	\$ 66.9	\$ (23.8)	\$ 65.3
<b>Earnings Per Share</b>					
<b>Basic:</b>					
Earnings (loss) from continuing operations attributable to MTI	\$ 2.10	\$ 1.87	\$ 1.80	\$ (0.55)	\$ 1.46
Earnings (loss) from discontinued operations attributable to MTI	--	--	--	(0.09)	0.27
Basic earnings (loss) per share attributable to MTI	\$ <u>2.10</u>	\$ <u>1.87</u>	\$ <u>1.80</u>	\$ <u>(.064)</u>	\$ <u>1.73</u>
<b>Diluted:</b>					
Earnings (loss) from continuing operations attributable to MTI	\$ 2.09	\$ 1.86	\$ 1.79	\$ (0.55)	\$ 1.45
Earnings (loss) from discontinued operations attributable to MTI	--	--	--	(0.09)	0.27
Diluted earnings (loss) per share attributable to MTI	\$ <u>2.09</u>	\$ <u>1.86</u>	\$ <u>1.79</u>	\$ <u>(0.64)</u>	\$ <u>1.72</u>
<b>Weighted average number of common shares outstanding:</b>					
Basic	35,340	36,018	37,228	37,448	37,786
Diluted	35,529	36,236	37,386	37,448	37,966
Dividends declared per common share	\$ 0.125	\$ 0.10	\$ 0.10	\$ 0.10	\$ 0.10
<b>Balance Sheet Data:</b>					
Working capital	\$ 514.4	\$ 539.4	\$ 520.3	\$ 447.8	\$ 380.7
Total assets	1,211.2	1,165.0	1,116.1	1,072.1	1,067.6
Long-term debt	8.5	85.4	92.6	92.6	97.2
Total debt	92.6	99.8	97.2	104.1	116.2
Total shareholders' equity	813.7	768.0	782.7	747.7	734.8

Shares and per share amounts have been retrospectively adjusted for all periods presented for the two-for-one stock split on December 11, 2012. See Note 1 to the consolidated financial statements, "Summary of Significant Accounting Policies", for additional information.

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

### Cautionary Statement for "Safe Harbor" Purposes under the Private Securities Litigation Reform Act of 1995

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements made by or on behalf of the Company. This report contains statements that the Company believes may be "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, particularly statements relating to the Company's objectives, plans or goals, future actions, future performance or results of current and anticipated products, sales efforts, expenditures, and financial results. From time to time, the Company also provides forward-looking statements in other publicly-released materials, both written and oral. Forward-looking statements provide current expectations and forecasts of future events such as new products, revenues and financial performance, and are not limited to describing historical or current facts. They can be identified by the use of words such as "believes," "expects," "plans," "intends," "anticipates," and other words and phrases of similar meaning.

Forward-looking statements are necessarily based on assumptions, estimates and limited information available at the time they are made. A broad variety of risks and uncertainties, both known and unknown, as well as the inaccuracy of assumptions and estimates, can affect the realization of the expectations or forecasts in these statements. Many of these risks and uncertainties are difficult to predict or are beyond the Company's control. Consequently, no forward-looking statements can be guaranteed. Actual future results may vary materially. Significant factors affecting the expectations and forecasts are set forth under "Item 1A — Risk Factors" in this Annual Report on Form 10-K.

The Company undertakes no obligation to update any forward-looking statements to reflect events or circumstances that arise after the date hereof. Investors should refer to the Company's subsequent filings under the Securities Exchange Act of 1934 for further disclosures.

### Income and Expense Items as a Percentage of Net Sales

Year Ended December 31,	2012	2011	2010
Net sales	100.0%	100.0%	100.0%
Cost of goods sold	78.2	79.7	79.1
Production margin	21.8	20.3	20.9
Marketing and administrative expenses	8.9	8.8	9.0
R e s e a r c h a n d d e v e l o p m e n t expenses	2.0	1.9	2.0
Restructuring charges	--	--	0.1
I n c o m e f r o m operations	10.9	9.6	9.8
Income from continuing operations before Provision for taxes	10.6	9.4	9.9
Provision (benefit) for taxes on income	3.0	2.6	2.9
Non-controlling interests	0.2	0.3	0.3
Net income	7.4%	6.5%	6.7%

### Executive Summary

The Company reported record earnings per share for 2012 of \$2.09 per share, an increase of 12% from 2011. The results reflected continued solid financial performance.

Worldwide sales were \$1.01 billion compared with \$1.04 billion in 2011, a decrease of 4 percent. Foreign exchange had an unfavorable impact on sales of \$26.5 million or 3 percentage points. In addition to the impact of foreign exchange, several temporary and permanent paper and steel mill closures in Europe and North America contributed to the sales decrease, which was partially offset by Paper PCC sales from new satellite facilities and the continued ramp up of satellite facilities that began operations in the past year.

Income from operations grew 10 percent to \$110.0 million as compared to \$100.3 million in the prior year. This increase was due to a strong operating performance highlighted by 6-percent company-wide productivity improvements, which resulted in savings of \$4 million, and a 3 percent decrease, or \$4 million savings, in total overhead expenses.

In 2012, the Company continued to advance the execution of its growth strategies of geographic expansion and new product innovation and development. During the year, we began operations in the fourth quarter of two new satellite plants, one in India and one in Thailand. In addition, we signed contracts for two new satellite PCC facilities in China. The two new satellite facilities in China will add approximately 132,000 tons of production capacity and should be

operational by the first quarter of 2014. Six more commercial agreements were signed with paper mills for our FulFill™ portfolio of products bringing the total to ten as of December 31, 2012. We presently have eleven commercial contracts for FulFill™. In 2012 the FulFill™ program generated \$1.4 million of



operating income. We expect the contribution of our FulFill™ program to generate operating income between \$2.5 million and \$3.0 million in 2013. The Refractory segment introduced a new, fourth generation Lacam® laser measurement system and expect additional Lacam® sales in 2013. We also signed an agreement with United Steel Company B.S.C. (SULB) to perform all refractory maintenance at a greenfield steel mill in Bahrain that started up in the third quarter of 2012. Minteq, working with other refractory companies, is responsible for coordinating refractory maintenance of the steel furnaces and other steel production vessels. We generated approximately \$3 million in revenue from this contract in 2012 and we expect to generate between \$8 million-\$10 million per year of revenue over the 3 year term of the contract.

The Company's balance sheet as of December 31, 2012 continues to be very strong. Cash, cash equivalents and short-term investments at December 31, 2012 were approximately \$468 million. Our cash flows from operations were approximately \$139 million in 2012. In addition, we had available lines of credit of \$183.5 million, our debt to equity ratio was 0.10, and our current ratio was 3.1.

We face some significant risks and challenges in the future:

- The industries we serve, primarily paper, steel, construction and automotive, have been adversely affected by the uncertain global economic climate, primarily in Europe. Although these markets have stabilized, our global business could be adversely affected by further decreases in economic activity. Our Refractories segment primarily serves the steel industry. Although North American production improved slightly in 2012 as compared with the prior year, we saw declines in European steel production and it remains below 2008 levels. In the paper industry, which is served by our Paper PCC product line, 2012 production levels for printing and writing papers within North America and Europe, our two largest markets were 5% and 4% below the prior year. In addition, our Processed Minerals and Specialty PCC product lines are affected by the domestic building and construction markets and the automotive market. Housing starts in 2012 averaged approximately 781 thousand units, and were up 28% from 2011 levels. Housing starts were at a peak rate of 2.1 million units in 2005.
- Some of our customers may experience mill shutdowns due to further consolidations, or may face liquidity issues, or bankruptcy, which could deteriorate the aging of our accounts receivable, increase our bad debt exposure and possibly trigger impairment of assets or realignment of our businesses.
- Consolidations and rationalizations in the paper and steel industries concentrate purchasing power in the hands of fewer customers, increasing pricing pressure on suppliers such as us.
- Most of our Paper PCC sales are subject to long-term contracts that may be terminated pursuant to their terms, or may be renewed on terms less favorable to us.
- We are subject to volatility in pricing and supply availability of our key raw materials used in our Paper PCC product line and Refractory product line.
- We continue to rely on China for a portion of our supply of magnesium oxide in the Refractories segment, which may be subject to uncertainty in availability and cost.
- Fluctuations in energy costs have an impact on all of our businesses.
- Changes in the fair market value of our pension assets, rates of return on assets, and discount rates could continue to have a significant impact on our net periodic pension costs as well as our funding status.
- As we expand our operations abroad we face the inherent risks of doing business in many foreign countries, including foreign exchange risk, import and export restrictions, and security concerns.
- The Company's operations, particularly in the mining and environmental areas (discharges, emissions and greenhouse gases), are subject to regulation by federal, state and foreign authorities and may be subject to, and presumably will be required to comply with, additional laws, regulations and guidelines which may be adopted in the future.

During the second quarter of 2011, M-real Corporation announced plans to divest its Alizay paper mill in France. Since that time, the mill has not been operating. In January 2013, Double A Paper Company announced it had acquired the Alizay mill. While there can be no assurance, we expect to negotiate a contract and the paper mill to resume operations in the second half of 2013. In 2011, sales from our Alizay mill were approximately \$7 million.

During the third quarter of 2011, NewPage Corporation filed for Chapter 11 bankruptcy protection. In 2012, the Company did business with five NewPage mills, including operating three satellite PCC facilities at NewPage locations. In December 2012, NewPage emerged from the bankruptcy process and the Company continues to supply PCC to these mills. Annual sales to NewPage locations in 2012 were approximately \$22 million.

The Company has evaluated these facilities for impairment of assets and, based upon the information currently available and probability-weighted cash flows of various potential outcomes, has determined that no impairment charge was required in the fourth quarter.

## Outlook

Looking forward, we remain cautious about the state of the global economy, particularly in Europe, and the impact it will have on our product lines. Although we saw market stabilization and improvement in 2012, there remains uncertainty as to the sustainability of the upturn.

In 2013, the Company will continue to focus on innovation and new product development and other opportunities for sales growth as follows:

- Develop multiple high-filler technologies, such as filler-fiber, under the FulFill™ platform of products, to increase the fill rate in freesheet paper and continue to progress with commercial discussions and full-scale paper machine trials.
- Increase our sales of PCC for paper by further penetration of the markets for paper filling at both freesheet and groundwood mills, particularly in emerging markets.
- Expand the Company's PCC coating product line using the satellite model.
- Promote the Company's expertise in crystal engineering, especially in helping papermakers customize PCC morphologies for specific paper applications.
- Expand PCC produced for paper filling applications by working with industry partners to develop new methods to increase the ratio of PCC for fiber substitutions.
- Develop unique calcium carbonates and talc products used in the manufacture of novel biopolymers, a new market opportunity.
- Deploy new talc and GCC products in paint, coating and packaging applications.
- Deploy value-added formulations of refractory materials that not only reduce costs but improve performance.
- Expand our solid core wire product line into BRIC, Middle Eastern and other Asian countries.
- Deploy our laser measurement technologies into new applications.
- Expand our refractory maintenance model to other steel makers globally.
- Deploy operational excellence principles into all aspects of the organization, including system infrastructure and lean principles.
- Explore selective acquisitions to fit our core competencies in minerals and fine particle technology.

However, there can be no assurance that we will achieve success in implementing any one or more of these opportunities.

## Results of Operations

Net Sales	2012			2011			2010		
	\$	% of Total Sales	Growth	\$	% of Total Sales	Growth	\$	% of Total Sales	
U.S.	\$ 562.5	55.9 %	1 %	\$ 557.5	53.4 %	4 %	\$ 534.3	53.3 %	
International	443.1	44.1 %	(9) %	487.4	46.6 %	4 %	468.1	46.7 %	
Net sales	\$ 1,005.6	100.0 %	(4) %	\$ 1,044.9	100.0 %	4 %	\$ 1,002.4	100.0 %	
Paper PCC	\$ 480.3	47.8 %	(3) %	\$ 497.0	47.5 %	0 %	\$ 496.6	49.5 %	
Specialty PCC	65.9	6.5 %	4 %	63.6	6.1 %	10 %	58.0	5.8 %	
PCC Products	\$ 546.2	54.3 %	(3) %	\$ 560.6	53.6 %	1 %	\$ 554.6	55.3 %	
Talc	\$ 48.1	4.8 %	3 %	\$ 46.9	4.5 %	7 %	\$ 44.0	4.4 %	
GCC	67.9	6.7 %	(1) %	68.6	6.6 %	3 %	66.4	6.6 %	
Processed Minerals Products	\$ 116.0	11.5 %	0 %	\$ 115.5	11.1 %	5 %	\$ 110.4	11.0 %	
Specialty Minerals Segment	\$ 662.2	65.8 %	(2) %	\$ 676.1	64.7 %	2 %	\$ 665.0	66.3 %	
Refractory Products	\$ 264.1	26.3 %	(8) %	\$ 287.4	27.5 %	9 %	\$ 264.5	26.4 %	
Metallurgical Products	79.3	7.9 %	(3) %	81.4	7.8 %	12 %	72.9	7.3 %	
Refractories Segment	\$ 343.4	34.2 %	(7) %	\$ 368.8	35.3 %	9 %	\$ 337.4	33.7 %	
Net sales	\$ 1,005.6	100.0 %	(4) %	\$ 1,044.9	100.0 %	4 %	\$ 1,002.4	100.0 %	

Worldwide net sales in 2012 decreased 4% from the previous year to \$1.01 billion. Foreign exchange had an unfavorable impact on sales of \$26.5 million or 3 percentage points of growth. Sales in the Specialty Minerals segment, which includes the PCC and Processed Minerals product lines, decreased 2% to \$662.2 million from \$676.1 million in 2011. Sales in the Refractories segment decreased 7% to \$343.4 million from \$368.8 million in the previous year. In 2011, worldwide net sales increased 4% to \$1,044.9 billion from \$1,002.4 billion in the prior year. Foreign exchange had a favorable impact on sales of \$21.0 million, or less than 2

percentage points of growth. In 2011, Specialty Minerals segment sales increased 2% and Refractories segment sales increased 9% from 2010 levels.

In 2012, worldwide net sales of PCC, which is primarily used in the manufacturing process of the paper industry, decreased 3% to \$546.2 million from \$560.6 million in the prior year. Foreign exchange had an unfavorable impact on sales of approximately \$17.3 million or 3 percentage points of growth. Worldwide net sales of Paper PCC decreased 3% to \$480.3 million from the \$497.0 million in the prior year. Volumes for this product line decreased 3 percent, primarily in Europe. Sales were affected by the closure of one satellite PCC facility in Finland, and the temporary shutdown of a satellite PCC facility in France, both of which occurred in the fourth quarter of 2011. There were, however, increased volumes from new satellites which largely offset the volume decline. Sales of Specialty PCC increased 4% to \$65.9 million from \$63.6 million in 2011. This increase was attributable to higher volumes.

In 2011 worldwide net sale of PCC, which is primarily used in the manufacturing process of the paper industry, increased 1% to \$560.6 million from \$554.6 million in the prior year. Foreign exchange had a favorable impact on sales of approximately \$10.9 million or less than 2 percentage points of growth. Worldwide net sales of Paper PCC were flat at \$497.0 million, increasing slightly from the \$496.6 million in the prior year. Total Paper PCC volumes decreased 4% from prior year levels with declines in all regions. Volume decreases of approximately \$20.7 million were offset by contractual price increases and the effects of foreign exchange. Sales of Specialty PCC increased 10% to \$63.6 million from \$58.0 million in 2010. This increase was attributable to higher volumes and the effects of foreign exchange.

Net sales of Processed Minerals products in 2012 were relatively flat at \$116.0 million as compared to \$115.5 million in 2011. GCC products decreased 1% to \$67.9 million while talc products increased 3% to \$48.1 million. Volume decreases of 2% were offset by price increases.

Net sales of Processed Minerals products in 2011 increased 5% to \$115.5 million from \$110.4 million in 2010. GCC products and talc products increased 3% and 7% to \$68.6 million and \$46.9 million, respectively. The increases in the Processed Minerals product line was attributable to increased volumes due to slight improvements in the residential and commercial construction markets and moderate improvements in the automotive market. Volumes increased 7% from the prior year.

Net sales in the Refractories segment in 2012 decreased 7% to \$343.4 million from \$368.8 million in the prior year. Foreign exchange had an unfavorable impact on sales of \$9.3 million, or approximately 3 percentage points. Sales of refractory products and systems to steel and other industrial applications decreased 8% to \$264.1 million from \$287.4 million. Sales of metallurgical products within the Refractories segment decreased 3% to \$79.3 million as compared with \$81.4 million last year. The decreases in all product lines within this segment were primarily due to volume reductions in all regions and the effects of foreign exchange.

Net sales in the Refractories segment in 2011 increased 9% to \$368.8 million from \$337.4 million in the prior year. Foreign exchange had a favorable impact on sales of \$10.1 million, or approximately 3 percentage points. Sales of refractory products and systems to steel and other industrial applications increased 9% to \$287.4 million from \$264.5 million. Sales of metallurgical products within the Refractories segment increased 12% to \$81.4 million as compared with \$72.9 million last year. The increases in all product lines within this segment were primarily due to price increases and the effects of foreign exchange.

Net sales in the United States grew approximately 1% to \$562.5 million in 2012 and represented approximately 55.9% of consolidated net sales. International sales decreased approximately 9% to \$443.1 million from \$487.4 million. The decrease in sales was primarily due to lower worldwide volumes and the effects of foreign exchange.

### Operating Costs and Expenses (Dollars in millions)

	2012	Growth	2011	Growth	2010
Cost of goods sold	\$ 786.2	(6)%	\$ 832.7	5%	\$ 793.2
Marketing and administrative	\$ 89.2	(3)%	\$ 92.1	2%	\$ 90.5
Research and development	\$ 20.2	5%	\$ 19.3	(2)%	\$ 19.6
Restructuring charges	\$ --	(100)%	\$ 0.5	(38)%	\$ 0.8

Cost of goods sold in 2012 was 78.2% of sales compared with 79.7% in the prior year. Production margin increased \$7.2 million, or 3% as compared with a 4% decrease in sales. In the Specialty Minerals segment, production margin increased 6%, or \$8.1 million, as compared with a 2% decrease in sales. This increase was primarily attributable to increased pricing of \$20 million, lower energy costs \$1.3 million, continued productivity improvements and cost improvements of \$4 million and combined higher volumes from our new satellite facilities and processed minerals product lines of \$7 million. These items were offset by increased material costs of \$12 million, the effects of continued permanent and temporary PCC facility closures and other volume declines of \$8 million and the effects of foreign exchange of approximately \$2.7 million. In the Refractories segment, production margin increased \$0.9 million, or 1% as compared with a 7% decrease in sales. This was primarily attributable to lower material costs of \$9 million and increased pricing of \$1.5 million, which more than offset the combined effect of volume declines and lower equipment sales of \$10 million and the effects of foreign exchange.

Cost of goods sold in 2011 was 79.7% of sales compared with 79.1% in the prior year. Production margin increased \$3 million, or 1% as compared with a 4% increase in sales. In the Specialty Minerals segment, production margin decreased 1%, or \$0.7 million, as compared with a 2% increase in sales. This segment incurred higher raw materials and energy costs that were not fully recovered by price increases. In the Refractories segment, production margin increased \$3.7 million, or 5% as compared with a 9% increase in sales. This segment incurred higher raw material costs that were partially offset by price increases, higher equipment sales and the effects of foreign exchange.

Marketing and administrative costs decreased 3% to \$89.2 million in 2012 from \$92.1 million in the prior year. Marketing and administrative costs as a percentage of net sales however, represented 8.9% of net sales as compared with 8.8% in the prior year. In 2011, marketing and administrative expenses were 1.7% higher than in the prior year.

Research and development expenses increased 5% in 2012 to \$20.2 million from \$19.3 million and represented 2.0% of net sales. In 2011, research and development expense decreased 2% from 2010 and represented 1.9% of net sales.

**Income from Operations**  
(Dollars in millions)

	<u>2012</u>	<u>Growth</u>	<u>2011</u>	<u>Growth</u>	<u>2010</u>
I n c o m e f r o m operations	\$ 110.0	10%	\$ 100.3	2%	\$ 98.3

The Company recorded income from operations in 2012 of \$110.0 million as compared with \$100.3 million in the prior year. Included in income from operations in 2011 were restructuring charges of \$0.5 million.

The Specialty Minerals segment recorded income from operations of \$84.1 million in 2012 as compared with \$72.8 million in the prior year. Included in income from operations in 2011 were restructuring charges of \$1.0 million.

The Refractories segment recorded income from operations of \$32.6 million in 2012 as compared to \$33.2 million in the prior year. Included in income from operations in 2011 were restructuring reversals of (\$0.6) million.

In 2011, the Specialty Minerals segment recorded income from operations of \$72.8 million as compared \$74.7 million in the prior year. The Refractories segment recorded income from operations of \$33.2 million in 2011 as compared with \$28.0 million in the previous year.

**Non-Operating Income (Deductions)**  
(Dollars in millions)

	<u>2012</u>	<u>Growth</u>	<u>2011</u>	<u>Growth</u>	<u>2010</u>
Non-operating income (deductions), net	\$ (3.0)	15 %	\$ (2.6)	* %	\$ 0.6

\* Percentage not meaningful

The Company recorded non-operating deductions of \$3.0 million in 2012 as compared with \$2.6 million in the previous year. This increase primarily relates to lower interest income and slightly higher foreign exchange losses.

The Company recorded non-operating deductions of \$2.6 million in 2011 as compared with non-operating income of \$0.6 million in the previous year. Included in non-operating deductions in 2011 were foreign currency losses of \$1.4 million recognized upon the sale of a 50% interest in and deconsolidation of the Company's joint venture in Korea.

**Provision for Taxes on Income**  
(Dollars in millions)

	<u>2012</u>	<u>Growth</u>	<u>2011</u>	<u>Growth</u>	<u>2010</u>
Provision for taxes on income	\$ 30.8	12 %	\$ 27.5	(5) %	\$ 29.0

The Company recorded provision for taxes on income of \$30.8 million in 2012 as compared with \$27.5 million in the previous year. The effective tax rate for 2012 was 28.8% as compared with 28.1% in the prior year. The increase in the tax rate in the current year primarily relates to a prior year favorable United States tax court case settlement and the resulting expiration of the statute of limitations of the tax years related to the tax court case.

The Company recorded provision for taxes on income of \$27.5 million in 2011 as compared to \$29.0 million in the previous year. The effective tax rate for 2011 was 28.1% as compared with 29.3% in the previous year. The decrease in the tax rate in the current year primarily relates to a favorable United States tax court case settlement.

The factors having the most significant impact on our effective tax rates in recent periods are the rate differential related to foreign earnings indefinitely invested, percentage depletion, and the reversal of tax reserves as a result of a tax court case settlement.

Percentage depletion allowances (tax deductions for depletion that may exceed our tax basis in our mineral reserves) are available to us under the income tax laws of the United States for operations conducted in the United States. The tax benefits from percentage depletion were \$4.1 million in 2012, \$4.0 million in 2011, and \$3.7 million in 2010.

We operate in various countries around the world that have tax laws, tax incentives and tax rates that are significantly different than those of the United States. Many of these differences combine to move our overall effective tax rate higher or lower than the United States statutory rate depending on the mix of income relative to income earned in the United States. The effects of foreign earnings and the related foreign rate differentials resulted in a decrease of income tax expense of \$5.0 million, \$0.9 million and \$3.1 million in 2012, 2011 and 2010, respectively. The increase of income tax benefits in 2012 as compared with 2011 results from the change in the mix of earnings in the foreign jurisdictions in 2012, statutory rate changes and a change in the amount of local income and tax adjustments. The decrease of income tax benefits in 2011 as compared with 2010 results from the change in the mix of earnings in the foreign jurisdictions in 2011, statutory tax rate changes, and a change in the amount of local income and tax adjustments.

**Income from Continuing Operations  
(Dollars in millions)**

	<u>2012</u>	<u>Growth</u>	<u>2011</u>	<u>Growth</u>	<u>2010</u>
Income from continuing operations	\$ 76.3	9%	\$ 70.3	0%	\$ 69.9

The Company recognized income from continuing operations of \$76.3 million in 2012 as compared to \$70.3 million in 2011. In 2010, the company recorded income from operations of \$69.9 million.

**Non-controlling Interests  
(Dollars in millions)**

	<u>2012</u>	<u>Growth</u>	<u>2011</u>	<u>Growth</u>	<u>2010</u>
Non-controlling interests	\$ 2.1	(22)%	\$ 2.7	(10)%	\$ 3.0

The decrease in the income attributable to non-controlling interests is due to the lower profitability in our joint ventures.

**Net Income attributable to Minerals  
Technologies Inc. (MTI)**

	<u>2012</u>	<u>Growth</u>	<u>2011</u>	<u>Growth</u>	<u>2010</u>
Net income attributable to MTI	\$ 74.1	10%	\$ 67.5	1%	\$ 66.9

The Company recorded net income of \$74.1 million in 2012 as compared to \$67.5 million in 2011. Diluted earnings per share were \$2.09 as compared with \$1.86 in the previous year.

In 2010, the Company recorded net income of \$66.9 million and diluted earnings per share of \$1.79.

**Liquidity and Capital Resources**

Cash flows provided from operations in 2012 were used principally to fund \$52.1 million of capital expenditures, and repurchase \$25.9 million in treasury shares. Cash provided from operating activities totaled \$139.9 million in 2012 as compared with \$133.7 million in 2011. The increase in cash from operating activities was primarily due to higher net income and lower income tax payments which were partially offset by increased pension plan funding. Included in cash flow from operations was pension plan funding of approximately \$17.0 million, \$6.6 million and \$8.5 million for the years ended December 31, 2012, 2011 and 2010, respectively.

Trade working capital is defined as trade accounts receivable, trade accounts payable and inventories. Our total days of trade working capital increased to 59 days from 55 days in 2011 primarily due to higher receivables and lower payables in our Refractories segment.

The funding status of the Company's pension plans was approximately 66% at December 31, 2012 and we have met all minimum funding requirements. The funding status at December 31, 2011 was 70%. The reduction in our funding status was due to a large increase in the projected benefit obligation from a change in the discount rate.

In 2011, the Company's Board of Directors authorized the Company's management to repurchase, at its discretion, up to \$75 million of additional shares over a two-year period. As of December 31, 2012, 633,575 shares have been repurchased under this program for \$30.7 million, or an average price of approximately \$48.38 per share.

On January 23, 2013, the Company's Board of Directors declared a regular quarterly dividend on its common stock of \$0.05 per share. No dividend will be payable unless declared by the Board and unless funds are legally available for payment thereof.

The Company is required to make future payments under various contracts, including debt agreements and lease agreements. The Company also has commitments to fund its pension plans and provide payments for other postretirement benefit plans. A summary of the Company's outstanding contractual obligations as of December 31, 2012 is as follows:

### Contractual Obligations

(millions of dollars)	Payments Due by Period				
	Total	2013	2014-2015	2016-2017	After 2017
Debt	\$ 85.5	\$ 77.0	\$ 8.5	\$ --	\$ --
Interest related to long term debt	2.7	2.6	0.1	--	--
Estimated pension and post retirement plan funding	29.0	11.0	18.0	--	--
Other long term liabilities	15.1	0.4	--	--	14.7
Operating lease obligations	18.9	3.8	5.2	3.1	6.8
Total contractual obligations	\$ 151.2	94.8	31.8	3.1	21.5

Long-term debt amounts in the preceding table represent the principal amounts of all outstanding long-term debt, including current portion. Maturities for long-term debt extend to 2014. The Company's \$75 million of private placement debt will mature in October 2013. The Company expects to refinance these notes.

Interest related to long-term debt is based on interest rates in effect as of December 31, 2012 and is calculated on debt with maturities that extend to 2014. As the contractual interest rates for certain debt are variable, actual cash payments may differ from the estimates provided in the preceding table.

Estimated minimum required pension funding and post-retirement benefits are based on actuarial estimates using current assumptions for discount rates, long-term rate of return on plan assets, rate of compensation increases, and health care cost trend rates. The Company has determined that it is not practicable to present expected pension funding and other postretirement benefit payments beyond 2015 and, accordingly, no amounts have been included in the table beyond such dates.

Other long term liabilities include asset retirement obligations. The Company will be contractually required to retire intangible long-lived assets at its PCC satellite facilities and mining operations.

The Company has several non-cancelable operating leases, primarily for office space and equipment. Operating lease obligations includes future minimum rental commitments under non-cancelable leases.

We have \$190.7 million in uncommitted short-term bank credit lines, of which \$7.1 million was in use at December 31, 2012. The credit lines are primarily in the US, with approximately \$20.7 million or 11% outside the US. The credit lines are generally one year in term at competitive market rates at large well-established institutions. The Company typically uses its available credit lines to fund working capital requirements or local capital spending needs. At the present time, we have no indication that the financial institutions would be unable to commit to these lines of credit should the need arise. We anticipate that capital expenditures for 2013 should be between \$65 million to \$75 million, principally related to the construction of PCC plants and other opportunities that meet our strategic growth objectives. We expect to meet our other long-term financing requirements from internally generated funds, uncommitted bank credit lines and, where appropriate, project financing of certain satellite plants. The aggregate maturities of long-term debt are as follows: 2013 - \$77.0 million; 2014 - \$8.5 million; 2015 - \$-- million; 2016 - \$-- million; 2017 - \$-- million; thereafter - \$-- million.

The Company's debt to capital ratio is 10%, which is well below the only financial covenant ratio in its debt agreements.

The total amount of contingent obligations associated with gross unrecognized tax benefits for uncertain tax positions, including positions impacting only the timing of tax benefits, was \$5.8 million at December 31, 2012. Payment of these obligations would result from settlements with taxing authorities. Due to the difficulty in determining the timing of settlements, these obligations are not included in the table above. We do not expect to make a tax payment related to these obligations within the next year that would significantly impact liquidity.

### Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities.

On an ongoing basis, we evaluate our estimates and assumptions, including those related to revenue recognition, allowance for doubtful accounts, valuation of inventories, valuation of long-term assets, goodwill and other intangible assets, pension plan assumptions, income taxes, asset retirement obligations, income tax valuation allowances, stock-based compensation, and litigation and environmental liabilities. We base our estimates on historical experience and on other assumptions that we believe to be

reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that cannot readily be determined from other sources. There can be no assurance that actual results will not differ from those estimates.

We believe the following critical accounting policies require us to make significant judgments and estimates in the preparation of our consolidated financial statements:

- Revenue recognition: Revenue from sale of products is recognized at the time the goods are shipped and title passes to the customer. In most of our PCC contracts, the price per ton is based upon the total number of tons sold to the customer during the year. Under those contracts, the price billed to the customer for shipments during the year is based on periodic estimates of the total annual volume that will be sold to the customer. Revenues are adjusted at the end of each year to reflect the actual volume sold. There were no significant revenue adjustments in the fourth quarter of 2012 and 2011, respectively. We have consignment arrangements with certain customers in our Refractories segment. Revenues for these transactions are recorded when the consigned products are consumed by the customer. Revenues from sales of equipment are recorded upon completion of installation and receipt of customer acceptance. Revenues from services are recorded when the services are performed.
- Allowance for doubtful accounts: Substantially all of our accounts receivable are due from companies in the paper, construction and steel industries. Accounts receivable are reduced by an allowance for amounts that may become uncollectible in the future. Such allowance is established through a charge to the provision for bad debt expenses. We recorded bad debt expenses of \$1.0 million, \$0.9 million and \$0.1 million in 2012, 2011 and 2010, respectively. In addition to specific allowances established for bankrupt customers, we also analyze the collection history and financial condition of our other customers considering current industry conditions and determine whether an allowance needs to be established or adjusted.
- Property, plant and equipment, goodwill, intangible and other long-lived assets: Property, plant and equipment are depreciated over their useful lives. Useful lives are based on management's estimates of the period that the assets can generate revenue, which does not necessarily coincide with the remaining term of a customer's contractual obligation to purchase products made using those assets. Our sales of PCC are predominately pursuant to long-term evergreen contracts, initially ten years in length, with paper mills at which we operate satellite PCC plants. The terms of many of these agreements have been extended, often in connection with an expansion of the satellite PCC plant. Failure of a PCC customer to renew an agreement or continue to purchase PCC from our facility could result in an impairment of assets or accelerated depreciation at such facility.
- Valuation of long-lived assets, goodwill and other intangible assets: We assess the possible impairment of long-lived assets and identifiable amortizable intangibles whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Goodwill is reviewed for impairment at least annually. Factors we consider important that could trigger an impairment review include the following:
  - Significant under-performance relative to historical or projected future operating results;
  - Significant changes in the manner of use of the acquired assets or the strategy for the overall business;
  - Significant negative industry or economic trends;
  - Market capitalization below invested capital.

The goodwill balance for each reporting unit as of December 31, 2012 and 2011, respectively, was as follows:

(\$ in millions)	December 31,	
	2012	2011
PCC	\$ 9.5	\$ 9.2
Processed Minerals	4.6	4.6
Refractories	51.7	50.9
<b>Total</b>	<b>\$ 65.8</b>	<b>\$ 64.7</b>

Annually, the Company performs a qualitative assessment for each of its reporting units to determine if the two step process for impairment testing is required. If the Company determines that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, the Company then evaluates the recoverability of goodwill using a two-step impairment test approach at the reporting unit level. Step one involves a) developing the fair value of total invested capital of each reporting unit in which goodwill is assigned; and b) comparing the fair value of total invested capital for each reporting unit to its carrying amount, to determine if



there is goodwill impairment. Should the carrying amount for a reporting unit exceed its fair value, then the step one test is failed, and the magnitude of any goodwill impairment is determined under step two. The amount of impairment loss is determined in Step Two by comparing the implied fair value of reporting unit goodwill with the carrying amount of goodwill.

The Company has three reporting units; PCC, Processed Minerals and Refractories. We identify our reporting units by assessing whether the components of our operating segments constitute businesses for which discrete financial information is available and management regularly reviews the operating results of those components.

In the fourth quarter of 2012, the Company performed a qualitative assessment of each of its reporting units and determined it was not more likely than not that the fair value of each of its reporting units was less than their carrying values.

- Accounting for income taxes: As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves estimating current tax expense together with assessing temporary differences resulting from differing treatments of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included in the consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income, and to the extent we believe that recovery is not likely, we must establish a valuation allowance. To the extent we establish a valuation allowance or change this allowance in a period, we must include an expense within the tax provision in the Consolidated Statements of Operations.

Deferred income tax assets represent amounts available to reduce income taxes payable on taxable income in future years. Such assets arise because of temporary differences between the financial reporting and tax bases of assets and liabilities, as well as from net operating loss. We evaluate the recoverability of these future tax deductions by assessing the adequacy of future expected taxable income from all sources, including reversal of taxable temporary differences and forecasted operating earnings. These sources of income inherently rely heavily on estimates. We use our historical experience and business forecasts to provide insight. Amounts recorded for deferred tax assets, net of valuation allowances, were \$47.5 million and \$44.4 million at December 31, 2012 and 2011, respectively. Such year-end 2012 amounts are expected to be fully recoverable within the applicable statutory expiration periods. To the extent we do not consider it more likely than not that a deferred tax asset will be recovered, a valuation allowance is established.

The application of income tax law is inherently complex. Laws and regulations in this area are voluminous and are often ambiguous. As such, we are required to make many subjective assumptions and judgments regarding our income tax exposures. Interpretations of and guidance surrounding income tax laws and regulations change over time. As such, changes in our subjective assumptions and judgments can materially affect amounts recognized in the consolidated balance sheets and statements of operations. See Note 4 to the consolidated financial statements, "Income Taxes," for additional detail on our uncertain tax positions.

- Pension Benefits: We sponsor pension and other retirement plans in various forms covering the majority of employees who meet eligibility requirements. Several statistical and actuarial models which attempt to estimate future events are used in calculating the expense and liability related to the plans. These models include assumptions about the discount rate, expected return on plan assets and rate of future compensation increases as determined by us, within certain guidelines. Our assumptions reflect our historical experience and management's best judgment regarding future expectations. In addition, our actuarial consultants also use subjective factors such as withdrawal and mortality rates to estimate these assumptions. The actuarial assumptions used by us may differ materially from actual results due to changing market and economic conditions, higher or lower withdrawal rates or longer or shorter life spans of participants, among other things. Differences from these assumptions may result in a significant impact to the amount of pension expense/liability recorded by us follows:

A one percentage point change in our major assumptions would have the following effects:

<b>Effect on Expense</b>				
(millions of dollars)	<u>Discount Rate</u>	<u>Salary Scale</u>	<u>Return on Asset</u>	
1% increase	\$ (3.7 )	\$ 0.5	\$ (1.3 )	
1% decrease	\$ 4.3	\$ (0.4 )	\$ 1.3	



### Effect on Projected Benefit Obligation

(millions of dollars)	Discount Rate	Salary Scale
1% increase	\$ (32.8 )	\$ 2.7
1% decrease	\$ 41.1	\$ (2.4 )

- The investment strategy for pension plan assets is to maintain a broadly diversified portfolio designed to both preserve and grow plan assets to meet future plan obligations. The Company's average rate of return on assets from inception through December 31, 2012 was over 9%. The Company's assets are strategically allocated among equity, debt and other investments to achieve a diversification level that dampens fluctuations in investment returns. The Company's long-term investment strategy is an investment portfolio mix of approximately 65% in equity securities and 35% in fixed income securities. As of December 31, 2012, the Company had approximately 70% of its pension assets in equity securities and 30% in fixed income securities. In 2012, a net charge of \$12.0 million (\$7.7 million after-tax) was recorded in other comprehensive loss, primarily due to a change in discount rates. In 2011, a net charge of \$41.4 million (\$25.6 million after-tax) was recorded in other comprehensive loss, primarily due to lower discount rates and lower returns on plan assets. In 2010, a net charge of \$2.2 million (\$1.8 million after-tax) was recorded in other comprehensive loss, primarily due to changes in plan assumptions.

We recognized pension expense of \$20.9 million in 2012 as compared to \$15.3 million in 2011, due primarily to higher amortization of recognized actuarial losses. Accounting guidance on retirement benefits requires companies to discount future benefit obligations back to today's dollars using a discount rate that is based on high-quality fixed-income investments. A decrease in the discount rate increases the pension benefit obligation, while an increase in the discount rate decreases the pension benefit obligation. This increase or decrease in the pension benefit obligation is recognized in Accumulated other comprehensive income (loss) and subsequently amortized into earnings as an actuarial gain or loss. The guidance also requires companies to use an expected long-term rate of return on plan assets for computing current year pension expense. Differences between the actual and expected returns are also recognized in Accumulated other comprehensive income (loss) and subsequently amortized into earnings as actuarial gains and losses. At the end of 2012, total actuarial losses recognized in Accumulated other comprehensive income (loss) for pension plans were \$93.8 million, as compared to \$84.7 million in 2011. The majority of the actuarial losses were due to decreases in the discount rate in 2011 and 2012 and lower actual rates of return on assets than expected during the financial crisis of 2008.

Actuarial losses for pensions will be impacted in future periods by actual asset returns, discount rate changes, actual demographic experience and other factors that impact these expenses. These losses, reported in Accumulated other comprehensive income (loss), will generally be amortized as a component of net periodic benefit cost on a straight-line basis over the average remaining service period of active employees expected to receive benefits under the benefit plans. At the end of 2012, the average remaining service period of active employees or life expectancy for fully eligible employees was 12 years. We expect our amortization of net actuarial losses to increase by approximately \$1.0 million in 2013 as compared to 2012, primarily due to a decrease in the discount rate. We expect our pension expense to be approximately \$23 million in 2013.

- **Asset Retirement Obligations:** We currently record the obligation for estimated asset retirement costs at fair value in the period incurred. Factors such as expected costs and expected timing of settlement can affect the fair value of the obligations. A revision to the estimated costs or expected timing of settlement could result in an increase or decrease in the total obligation which would change the amount of amortization and accretion expense recognized in earnings over time.
  - A one-percent increase or decrease in the discount rate would change the total obligation by approximately \$0.1 million.
  - A one-percent increase or decrease in the inflation rate would change the total obligation by approximately \$0.1 million.
- **Stock Based Compensation:** The Company uses the Black-Scholes option pricing model to determine the fair value of stock options on their date of grant. This model is based upon assumptions relating to the volatility of the stock price, the life of the option, risk-free interest rate and dividend yield. Of these, stock price volatility and option life require greater levels of judgment and are therefore critical accounting estimates.

We used a stock price volatility assumption based upon the historical and implied volatility of the Company's stock. We believe this is a good indicator of future, actual and implied volatilities. For stock options granted in the period ended December 31, 2012, the Company used a volatility assumption of 31.26%.

The expected life calculation was based upon the observed and expected time to post-vesting forfeiture and exercise. For stock options granted during the fiscal year ended December 31, 2012, the Company used a 6.86 year life assumption.

The Company believes the above critical estimates are based upon outcomes most likely to occur. If we were to simultaneously increase or decrease the option life by one year and the volatility by 100 basis points, recognized compensation expense would have changed approximately \$0.1 million in either direction for the year ended December 31, 2012.

For a detailed discussion on the application of these and other accounting policies, see "Summary of Significant Accounting Policies" in the Notes to the Consolidated Financial Statements in Item 15 of this report, beginning on page F-6. This discussion and analysis should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this report.

### **Inflation**

Historically, inflation has not had a material adverse effect on us. However, in recent years both business segments have been affected by rapidly rising raw material and energy costs. The Company and its customers will typically negotiate reasonable price adjustments in order to recover a portion of these rapidly escalating costs. As the contracts pursuant to which we construct and operate our satellite PCC plants generally adjust pricing to reflect increases in costs resulting from inflation, there is a time lag before such price adjustments can be implemented.

### **Cyclical Nature of Customers' Businesses**

The bulk of our sales are to customers in the paper manufacturing, steel manufacturing and construction industries, which have historically been cyclical. The pricing structure of some of our long-term PCC contracts makes our PCC business less sensitive to declines in the quantity of product purchased. However, we cannot predict the economic outlook in the countries in which we do business, nor in the key industries we serve.

### **Recently Issued Accounting Standards**

Changes to accounting principles generally accepted in the United States of America (U.S. GAAP) are established by the Financial Accounting Standards Board (FASB) in the form of accounting standards updates (ASU's) to the FASB's Accounting Standards Codification.

The Company considers the applicability and impact of all ASU's. ASU's not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on our consolidated financial position and results of operations.

In May 2011, the FASB issued amendments to disclosure requirements for common fair value measurement. These amendments, effective for the interim and annual periods beginning on or after December 15, 2011 (early adoption was prohibited), resulted in a common definition of fair value and common requirements for measurement of and disclosure requirements between U.S. GAAP and International Financial Reporting Standards. Consequently, the amendments change some fair value measurement principles and disclosure requirements. The Company adopted this guidance effective January 1, 2012. The implementation of the amended accounting guidance has not had a material impact on our consolidated financial position or results of operations.

In June 2011, the FASB issued amendments to disclosure requirements for presentation of comprehensive income. This guidance, effective retrospectively for the interim and annual periods beginning on or after December 15, 2011 (early adoption was permitted), requires presentation of total comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. In December 2011, the FASB issued an amendment to defer the presentation on the face of the financial statements the effects of reclassifications out of accumulated other comprehensive income on the components of net income and other comprehensive income for annual and interim financial statements. The implementation of the amended accounting guidance has not had a material impact on our consolidated financial position or results of operations. In February 2013, the FASB issued amendments to disclosure requirements for presentation of comprehensive income. The standard requires presentation (either in a single note or parenthetically on the face of the financial statements) of the effect of significant amounts reclassified from each component of accumulated other comprehensive income based on its source and the income statement line items affected by the reclassification. If a component is not required to be reclassified to net income in its entirety, a cross reference to the related footnote for additional information will be required. The amendments are effective prospectively for reporting periods beginning after December 15, 2012 (early adoption was permitted). The Company adopted this guidance effective January 1, 2012. The implementation of the amended accounting guidance is not expected to have a material impact on our consolidated financial position or results of operations.

In September 2011, the FASB issued amendments to the goodwill impairment guidance which provides an option for companies to use a qualitative approach to test goodwill for impairment if certain conditions are met. The amendments are effective for annual and interim goodwill impairment tests performed for fiscal years beginning after December 15, 2011 (early adoption was permitted). The Company early adopted this guidance effective September 15, 2011. The implementation of the amended accounting guidance has not had a material impact on our consolidated financial position or results of operations.

In July 2012, the FASB issued amendments to the indefinite-lived intangible asset impairment guidance which provides an option for companies to use a qualitative approach to test indefinite-lived intangible assets for impairment if certain conditions are met. The amendments are effective for annual and interim indefinite-lived intangible asset impairment tests performed for fiscal years beginning after September 15, 2012 (early adoption is permitted). The Company will adopt this guidance effective January 1, 2013. The implementation of the amended accounting guidance is not expected to have a material impact on our consolidated financial position or results of operations.

#### **Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

Market risk represents the risk of loss that may have an impact on our financial position, results of operations or cash flows due to adverse changes in market prices and foreign currency and interest rates. We are exposed to market risk because of changes in foreign currency exchange rates as measured against the U.S. dollar. We do not anticipate that near-term changes in exchange rates will have a material impact on our future earnings or cash flows. However, there can be no assurance that a sudden and significant change in the value of foreign currencies would not have a material adverse effect on our financial condition and results of operations. Approximately 44% of our bank debt bears interest at variable rates; therefore our results of operations would only be affected by interest rate changes to such bank debt outstanding. An immediate 10% change in interest rates would not have a material effect on our results of operations over the next fiscal year.

We do not enter into derivatives or other financial instruments for trading or speculative purposes. When appropriate, we enter into derivative financial instruments, such as forward exchange contracts and interest rate swaps, to mitigate the impact of foreign exchange rate movements and interest rate movements on our operating results. The counterparties are major financial institutions. Such forward exchange contracts and interest rate swaps would not subject us to additional risk from exchange rate or interest rate movements because gains and losses on these contracts would offset losses and gains on the assets, liabilities, and transactions being hedged. We had open forward exchange contracts to purchase approximately \$0.8 million and \$0.2 million of foreign currencies as of December 31, 2012 and 2011, respectively. These contracts matured in January and February of 2013 and January 2012, respectively. The fair value of these instruments at December 31, 2012 and December 31, 2011 was an asset of less than \$0.1 million and a liability of less than \$0.1 million, respectively.

In 2008, the Company entered into forward contracts to sell 30 million Euros as a hedge of its net investment in Europe. These contracts mature in October 2013. The fair value of these instruments at December 31, 2012 was an asset of \$3.2 million. The fair value of these instruments at December 31, 2011 was an asset of \$3.5 million.

#### **Item 8. Financial Statements and Supplementary Data**

The financial information required by Item 8 is contained in Item 15 of Part IV of this report.

#### **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None.

#### **Item 9A. Controls and Procedures**

##### ***Disclosure Controls and Procedures***

As of the end of the period covered by this report, and under the supervision and with participation of the Company's management, including the Chief Executive Officer and the Chief Financial Officer, the Company carried out an evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures, pursuant to Exchange Act Rule 13a-15(b). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of December 31, 2012.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we have included a report of management's assessment of the design and operating effectiveness of our internal controls as part of this report. Management's report is included in our consolidated financial statements beginning on page F-1 of this report under the caption entitled "Management's Report on Internal Control Over Financial Reporting."

The Company has substantially completed the upgrade and implementation of a global enterprise resource planning ("ERP") system to manage its business operations and all of our domestic and European locations are using the new systems. The transition to the new system has proceeded to date without any adverse effects to internal controls. We believe that the controls as modified are appropriate and functioning effectively.

## ***Changes in Internal Control Over Financial Reporting***

There was no change in the Company's internal control over financial reporting during the most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

### **Item 9B. Other Information**

None

## **PART III**

### **Item 10. Directors, Executive Officers and Corporate Governance**

Set forth below are the names and ages of all Executive Officers of the Registrant indicating all positions and offices with the Registrant held by each such person, and each such person's principal occupations or employment during the past five years.

<u>Name</u>	<u>Age</u>	<u>Position</u>
Joseph C. Muscari	66	Chairman of the Board and Chief Executive Officer
Douglas T. Dietrich	43	Senior Vice President, Finance and Treasury, Chief Financial Officer
Douglas W. Mayger	55	Senior Vice President, Performance Minerals and MTI Supply Chain
Thomas J. Meek	55	Senior Vice President, General Counsel and Secretary, Chief Compliance Officer
D.J. Monagle, III	50	Senior Vice President and Managing Director, Paper PCC
Michael A. Cipolla	55	Vice President, Corporate Controller and Chief Accounting Officer
Jonathan J. Hastings	50	Vice President, Corporate Development
Johannes C. Schut	48	Vice President and Managing Director, Minteq International

Joseph C. Muscari was elected Chairman of the Board and Chief Executive Officer effective March 1, 2007. Prior to that, he was Executive Vice President and Chief Financial Officer of Alcoa Inc. He has served as a member of the Board of Directors since 2005.

Douglas T. Dietrich was elected Senior Vice President, Finance and Treasury, Chief Financial Officer effective January 1, 2011. Prior to that, he was appointed Vice President, Corporate Development and Treasury effective August 2007. He had been Vice President, Alcoa Wheel Products since 2006 and President, Latin America Extrusions and Global Rod and Bar Products since 2002.

Douglas W. Mayger was elected Senior Vice President, Performance Minerals and Supply Chain in June 2011. Prior to that, he was Vice President and Managing Director, Performance Minerals which encompasses the Processed Minerals product line and the Specialty PCC product line, effective October 1, 2008. Prior to that, he was General Manager- Carbonates West, Performance Minerals and Business Manager - Western Region. Before joining the Company as plant manager in Lucerne Valley in 2002, he served as Vice President of Operations for Aggregate Industries.

Thomas J. Meek was elected Senior Vice President, General Counsel, Corporate Secretary and Chief Compliance Officer in October 2011. Prior to that, he was Vice President, General Counsel and Secretary of the Company effective September 1, 2009. Prior to that, he served as Deputy General Counsel at Alcoa. Before joining Alcoa in 1999, Mr. Meek worked with Koch Industries, Inc. of Wichita, Kansas, where he held numerous supervisory positions. His last position there was Interim General Counsel. From 1985 to 1990, Mr. Meek was an Associate/Partner in the Wichita, Kansas law firm of McDonald, Tinker, Skaer, Quinn & Herrington, P.A.

D.J. Monagle, III was elected Senior Vice President and Managing Director, Paper PCC, effective October 1, 2008. In November 2007, he was appointed Vice President and Managing Director - Performance Minerals. He joined the Company in January of 2003 and held positions of increasing responsibility including Vice President, Americas, Paper PCC and Global Marketing Director, Paper PCC. Before joining the Company, Mr. Monagle worked for the Paper Technology Group at Hercules between 1990 and 2003, where he held sales and marketing positions of increasing responsibility. Between 1985 and 1990, he served as an aviation officer in the U.S. Army's 11<sup>th</sup> Armored Cavalry Regiment, leaving the service as a troop commander with a rank of Captain.

Michael A. Cipolla was elected Vice President, Corporate Controller and Chief Accounting Officer in July 2003. Prior to that, he served as Corporate Controller and Chief Accounting Officer of the Company since 1998. From 1992 to 1998 he served as Assistant Corporate Controller.

Jonathan J. Hastings was elected Vice President, Corporate Development effective September 2011. Prior to that, he was Senior Director of Strategy and New Business Development- Coatings, Global at The Dow Chemical Company. Prior to that he held positions of increasing responsibility at Rohm and Haas, including Vice President & General Manager—Packaging and Building Materials—Europe.

Johannes C. Schut was elected Vice President and Managing Director, Minteq International in March 2011. He joined the Company in 2004 as Director of Finance- Europe. In 2006, he was named Vice President, Minteq – Europe including Middle East and India. Before joining Minerals Technologies Inc., Mr. Schut held positions of increasing responsibility with Royal Phillips Electronics and Royal FrieslandCampina – DMV International.

The information concerning the Company's Board of Directors required by this item is incorporated herein by reference to the Company's Proxy Statement, under the captions "Committees of the Board of Directors" and "Item 1- Election of Directors."

The information regarding compliance with Section 16(a) of the Securities Exchange Act of 1934 required by this Item is incorporated herein by reference to the Company's Proxy Statement, under the caption "Section 16(a) Beneficial Ownership Reporting Compliance."

The Board has established a code of ethics for the Chief Executive Officer, the Chief Financial Officer, and the Chief Accounting Officer entitled "Code of Ethics for the Senior Financial Officers," which is available on our website, [www.mineralstech.com](http://www.mineralstech.com), under the links entitled *Corporate Responsibility*, *Corporate Governance* and *Policies and Charters*.

#### **Item 11. Executive Compensation**

The information appearing in the Company's Proxy Statement under the captions "Compensation Discussion and Analysis," "Report of the Compensation Committee" and "Compensation of Executive Officers and Directors" is incorporated herein by reference.

#### **Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information appearing in the Company's Proxy Statement under the caption "Security Ownership of Certain Beneficial Owners and Management" is incorporated herein by reference.

#### **Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information appearing in the Company's Proxy Statement under the caption "Certain Relationships and Related Transactions" is incorporated herein by reference.

The Board has established Corporate Governance principles which include guidelines for determining Director independence, which is available on our website, [www.mineralstech.com](http://www.mineralstech.com), under the links entitled *Corporate Responsibility*, *Corporate Governance* and *Policies and Charters*. The information appearing in the Company's Proxy Statement under the caption "Corporate Governance – Director Independence" is incorporated herein by reference.

#### **Item 14. Principal Accountant Fees and Services**

The information appearing in the Company's Proxy Statement under the caption "Principal Accountant Fees and Services" is incorporated herein by reference.

## PART IV

### Item 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this report:

1. Financial Statements. The following Consolidated Financial Statements of Mineral Technologies Inc. and subsidiary companies and Reports of Independent Registered Public Accounting Firm are set forth on pages F-2 to F-33.

Consolidated Balance Sheets as of December 31, 2012 and 2011  
Consolidated Statements of Income for the years ended December 31, 2012, 2011 and 2010  
Consolidated Statements of Comprehensive Income for the years ended December 31, 2012, 2011 and 2010  
Consolidated Statements of Cash Flows for the years ended December 31, 2012, 2011 and 2010  
Consolidated Statements of Shareholders' Equity for the years ended December 31, 2012, 2011 and 2010  
Notes to the Consolidated Financial Statements  
Reports of Independent Registered Public Accounting Firm  
Management's Report on Internal Control Over Financial Reporting

2. Financial Statement Schedule. The following financial statement schedule is filed as part of this report:

	<u>Page</u>
Schedule II - Valuation and Qualifying Accounts	S-1

All other schedules for which provision is made in the applicable accounting regulations of the SEC are not required under the related instructions or are inapplicable and, therefore, have been omitted.

3. Exhibits. The following exhibits are filed as part of, or incorporated by reference into, this report.

- 3.1 -Restated Certificate of Incorporation of the Company (1)
- 3.2 -By-Laws of the Company as amended and restated effective May 25, 2005 (2)
- 3.3 -Certificate of Designations authorizing issuance and establishing designations, preferences and rights of Series A Junior Preferred Stock of the Company (1)
- 4.1 -Specimen Certificate of Common Stock (1)
- 10.1 -Asset Purchase Agreement, dated as of September 28, 1992, by and between Specialty Refractories Inc. and Quigley Company Inc. (3)
- 10.1(a) -Agreement dated October 22, 1992 between Specialty Refractories Inc. and Quigley Company Inc., amending Exhibit 10.1 (4)
- 10.1(b) -Letter Agreement dated October 29, 1992 between Specialty Refractories Inc. and Quigley Company Inc., amending Exhibit 10.1 (4)
- 10.2 -Reorganization Agreement, dated as of September 28, 1992, by and between the Company and Pfizer Inc (3)
- 10.3 -Asset Contribution Agreement, dated as of September 28, 1992, by and between Pfizer Inc and Specialty Minerals Inc. (3)
- 10.4 -Asset Contribution Agreement, dated as of September 28, 1992, by and between Pfizer Inc and Barretts Minerals Inc. (3)
- 10.4(a) -Agreement dated October 22, 1992 between Pfizer Inc, Barretts Minerals Inc. and Specialty Minerals Inc., amending Exhibits 10.3 and 10.4 (4)
- 10.5 -Employment Agreement, dated November 27, 2006, between the Company and Joseph C. Muscari (5) (+)
- 10.5(a) -Second to Employment Agreement, dated July 21, 2010, between the Company and Joseph C. Muscari (6) (+)
- 10.6 -Form of Employment Agreement between the Company and each of Michael A. Cipolla, Douglas T. Dietrich, Jonathan J. Hastings, Douglas W. Mayger, Thomas J. Meek and D.J. Monagle, III (7) (+)
- 10.6(a) -Form of amendment to Employment Agreement between the Company and each of Joseph C. Muscari, Michael A. Cipolla, Douglas T. Dietrich, Jonathan J. Hastings, Douglas W. Mayger, Thomas J. Meek, D.J. Monagle III and Johannes C. Schut (8) (+)
- 10.7 -Form of Severance Agreement between the Company and each of Joseph C. Muscari, Michael A. Cipolla, Douglas T. Dietrich, Jonathan J. Hastings, Douglas W. Mayger, Thomas J. Meek, D.J. Monagle and Johannes C. Schut(9) (+)
- 10.7(a) -Form of amendment to Severance Agreement between the Company and each of Joseph C. Muscari, Michael A. Cipolla, Douglas T. Dietrich, Jonathan J. Hastings, Douglas W. Mayger, Thomas J. Meek and D.J. Monagle, III (10) (+)

- 10.8 -Form of Indemnification Agreement between the Company and each of Joseph C. Muscari, Michael A. Cipolla, Douglas T. Dietrich, Jonathan J. Hastings, Douglas W. Mayger, Thomas J. Meek, D.J. Monagle, Johannes C. Schut and each of the Company's non-employee directors III (11) (+)
- 10.9 -Company Employee Protection Plan, as amended August 27, 1999 (12) (+)
- 10.10 -Company Nonfunded Deferred Compensation and Unit Award Plan for Non-Employee Directors, as amended and restated effective January 1, 2008 (13) (+)
- 10.10(a) -First Amendment to the Company Nonfunded Deferred Compensation and Unit Award Plan for Non-Employee Directors, dated January 18, 2012 (14) (+)
- 10.11 -2001 Stock Award and Incentive Plan of the Company, as amended and restated as of March 18, 2009 (15) (+)
- 10.12 -Company Retirement Plan, as amended and restated, dated December 21, 2012 (\*)
- 10.13 -Company Supplemental Retirement Plan, amended and restated effective December 31, 2009 (16) (+)
- 10.14 -Company Savings and Investment Plan, as amended and restated, dated December 21, 2012 (\*)
- 10.15 -Company Supplemental Savings Plan, amended and restated effective December 31, 2009 (17) (+)
- 10.15(a) -Amendment to the Company Supplemental Savings Plan, dated December 28, 2011 (18)(+)
- 10.16 -Company Health and Welfare Plan, effective as of April 1, 2003 and amended and restated as of January 1, 2006 (19)(+)
- 10.16(a) -Amendment to the Company Health and Welfare Plan, dated May 19, 2009 (20) (+)
- 10.17 -Company Retiree Medical Plan, effective as of January 1, 2011 (21)(+)
- 10.18 -Amended and Restated Grantor Trust Agreement, dated as of April 1, 2010, by and between the Company and the Wilmington Trust Company (22)(+)
- 10.19 -Note Purchase Agreement, dated as of October 5, 2006, among the Company, Metropolitan Life Insurance Company and MetLife Insurance Company of Connecticut with respect to the Company's issuance of \$75,000,000 in aggregate principal amount of senior unsecured notes due October 5, 2013 (23)
- 10.20 -Indenture, dated July 22, 1963, between the Cork Harbour Commissioners and Roofchrome Limited (3)
- 21.1 -Subsidiaries of the Company (\*)
- 23.1 -Consent of Independent Registered Public Accounting Firm (\*)
- 24 -Power of Attorney (\*)
- 31.1 -Rule 13a-14(a)/15d-14(a) Certification executed by the Company's principal executive officer (\*)
- 31.2 -Rule 13a-14(a)/15d-14(a) Certification executed by the Company's principal financial officer (\*)
- 32 -Section 1350 Certification (\*)
- 95 Information Concerning Mine Safety Violations (\*)
- (1)Incorporated by reference to the exhibit so designated filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2003.
- (2)Incorporated by reference to the exhibit so designated filed with the Company's Current Report on Form 8-K filed on May 27, 2005.
- (3)Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-51292), originally filed on August 25, 1992.
- (4)Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-59510), originally filed on March 15, 1993.
- (5)Incorporated by reference to exhibit 10.1 filed with the Company's Current Report on Form 8-K/A filed on December 1, 2006.
- (6)Incorporated by reference to the exhibit 10.1 filed with the Company's Current Report on form 8-K filed on July 27, 2010
- (7)Incorporated by reference to exhibit 10.5 filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2006.
- (8)Incorporated by reference to exhibit 10.6(a) filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2009.
- (9)Incorporated by reference to exhibit 10.6 filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2005.
- (10)Incorporated by reference to exhibit 10.7(a) filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2009.
- (11)Incorporated by reference to exhibit 10.1 filed with the Company's Current Report on Form 8-K filed on May 8, 2009.
- (12)Incorporated by reference to exhibit 10.7 filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2004.

- (13) Incorporated by reference to exhibit 10.8 filed with the Company's Quarterly Report on Form 10-Q for the quarter ended March 30, 2008.
  - (14) Incorporated by reference to exhibit 10.11(a) filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2011.
  - (15) Incorporated by reference to exhibit 10.1 filed with the Company's Current Report on Form 8-K filed on May 11, 2009.
  - (16) Incorporated by reference to exhibit 10.13 filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2009.
  - (17) Incorporated by reference to exhibit 10.15 filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2009.
  - (18) Incorporated by reference to exhibit 10.16(a) filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2011.
  - (19) Incorporated by reference to exhibit 10.14 filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2006.
  - (20) Incorporated by reference to exhibit 10.16(a) filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2009.
  - (21) Incorporated by reference to exhibit 10.17 filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2010.
  - (22) Incorporated by reference to exhibit 10.1 filed with the Company's Quarterly Report on Form 10-Q for the period ended April 4, 2010.
  - (23) Incorporated by reference to the exhibit 10.1 filed with the Company's Current Report on Form 8-K filed on October 11, 2006.
- (\*) Filed herewith.
- (+) Management contract or compensatory plan or arrangement required to be filed pursuant to Item 601 of Regulation S-K.



**SIGNATURES**

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.

By: /s/ Joseph C. Muscari  
Joseph C. Muscari  
Chairman of the Board  
and Chief Executive Officer

February 22, 2013

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 in the capacities and on the dates indicated:

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ Joseph C. Muscari</u> Joseph C. Muscari	Chairman of the Board and Chief Executive Officer (principal executive officer)	February 22, 2013
<u>/s/ Douglas T. Dietrich</u> Douglas T. Dietrich	Senior Vice President-Finance and Treasury, Chief Financial Officer (principal financial officer)	February 22, 2013
<u>/s/ Michael A. Cipolla</u> Michael A. Cipolla	Vice President - Controller and Chief Accounting Officer (principal accounting officer)	February 22, 2013

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
* _____ Paula H. J. Cholmondeley	Director	February 22, 2013
* _____ Robert L. Clark	Director	February 22, 2013
* _____ Duane R. Dunham	Director	February 22, 2013
* _____ Steven J. Golub	Director	February 22, 2013
* _____ Michael F. Pasquale	Director	February 22, 2013
* _____ Marc E. Robinson	Director	February 22, 2013
* _____ Barbara Smith	Director	February 22, 2013

\* By: /s/ Thomas J. Meek  
 Thomas J. Meek  
 Attorney-in-Fact

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES

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INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**CONSOLIDATED BALANCE SHEETS**  
(thousands of dollars)

		<b>December 31,</b>	
		<b>2012</b>	<b>2011</b>
<b>Assets</b>			
<b>Current assets:</b>			
Cash and cash equivalents	\$	454,092	\$ 395,152
Short-term investments, at cost which approximates market		14,178	18,494
Accounts receivable, less allowance for doubtful accounts:			
2012 - \$3,837; 2011 - \$3,008		193,328	194,317
Inventories		84,569	90,760
Prepaid expenses and other current assets		18,318	21,566
<b>Total current assets</b>		<b>764,485</b>	<b>720,289</b>
Property, plant and equipment, less accumulated depreciation and depletion		317,669	318,134
Goodwill		65,829	64,671
Other assets and deferred charges		63,206	61,861
<b>Total assets</b>	<b>\$</b>	<b>1,211,189</b>	<b>\$1,164,955</b>
<b>Liabilities and Shareholders' Equity</b>			
<b>Current liabilities:</b>			
Short-term debt	\$	7,111	\$ 5,846
Current maturities of long-term debt		76,977	8,552
Accounts payable		98,371	103,354
Income taxes payable		8,862	5,334
Accrued compensation and related items		33,603	33,026
Restructuring liabilities		318	1,411
Other current liabilities		24,856	23,379
<b>Total current liabilities</b>		<b>250,098</b>	<b>180,902</b>
Long-term debt		8,478	85,449
Accrued pension and postretirement benefits		108,035	97,318
Other non-current liabilities		30,859	33,266
<b>Total liabilities</b>		<b>397,470</b>	<b>396,935</b>
<b>Commitments and contingent liabilities (Notes 15 and 16)</b>			
<b>Shareholders' equity:</b>			
Preferred stock, without par value; 1,000,000 shares authorized; none issued		--	--
Common stock at par, \$0.10 par value; 100,000,000 shares authorized;			
Issued 47,002,939 shares in 2012 and 46,751,260 shares in 2011		4,700	4,675
Additional paid-in capital		345,929	333,372
Retained earnings		1,032,869	963,130
Accumulated other comprehensive loss		(51,198)	(45,331)
Less common stock held in treasury, at cost; 12,053,319			
shares in 2012 and 11,479,279 shares in 2011		(541,889)	(514,234)
<b>Total MTI shareholders' equity</b>		<b>790,411</b>	<b>741,612</b>
Non-controlling interest		23,308	26,408
<b>Total shareholders' equity</b>		<b>813,719</b>	<b>768,020</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$</b>	<b>1,211,189</b>	<b>\$1,164,955</b>

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**CONSOLIDATED STATEMENTS OF INCOME**

(thousands of dollars, except per share data)

	<b>Year Ended December 31,</b>		
	<b>2012</b>	<b>2011</b>	<b>2010</b>
Net sales	\$ 1,005,619	\$ 1,044,853	\$ 1,002,354
Cost of goods sold	786,245	832,657	793,161
Production margin	219,374	212,196	209,193
Marketing and administrative expenses	89,161	92,058	90,474
Research and development expenses	20,172	19,330	19,577
Restructuring and other costs	--	470	865
Income from operations	<u>110,041</u>	<u>100,338</u>	<u>98,277</u>
Interest income	3,168	3,907	2,765
Interest expense	(3,221)	(3,254)	(3,336)
Foreign exchange gains (losses)	(1,348)	(1,211)	324
Other income (deductions)	(1,594)	(2,040)	819
Non-operating income (deductions), net	<u>(2,995)</u>	<u>(2,598)</u>	<u>572</u>
Income from operations before provision for taxes	107,046	97,740	98,849
Provision for taxes on income	30,777	27,486	28,963
Consolidated net income	<u>76,269</u>	<u>70,254</u>	<u>69,886</u>
Less: Net income attributable to non-controlling interests	(2,122)	(2,733)	(3,017)
Net income attributable to Minerals Technologies Inc. (MTI)	<u>\$ 74,147</u>	<u>\$ 67,521</u>	<u>\$ 66,869</u>
<b>Earnings per share:</b>			
Basic	<u>\$ 2.10</u>	<u>\$ 1.87</u>	<u>\$ 1.80</u>
Diluted	<u>\$ 2.09</u>	<u>\$ 1.86</u>	<u>\$ 1.79</u>

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**

(thousands of dollars)

	<b>Year Ended December 31,</b>		
	<b>2012</b>	<b>2011</b>	<b>2010</b>
Consolidated net income	\$ 76,269	\$ 70,254	\$ 69,886
Other comprehensive income, net of tax:			
Foreign currency translation adjustments	1,479	(17,565)	(8,173)
Pension and postretirement plan adjustments	(7,730)	(25,630)	347
Sale of interest in business	--	(820)	--
Cash flow hedges:			
Reclassification adjustments	11	47	45
Net derivative gains (losses) arising during the period	(204)	529	2,020
Comprehensive income	69,825	26,815	64,125
Comprehensive income attributable to non-controlling interest	(1,545)	(1,035)	(4,039)
Comprehensive income attributable to MTI	68,280	25,780	60,086

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

(thousands of dollars)

	Year Ended December 31,		
	2012	2011	2010
<b>Operating Activities</b>			
Consolidated net income	\$ 76,269	\$ 70,254	\$ 69,886
Adjustments to reconcile income from continuing operations to net cash provided by operating activities:			
Depreciation, depletion and amortization	51,209	58,223	63,981
Loss on disposal of property, plant and equipment	1,093	288	941
Deferred income taxes	1,257	1,250	1,772
Provision for bad debts	1,011	878	49
Stock-based compensation	5,476	7,237	5,860
Other non-cash items	612	41	189
Changes in operating assets and liabilities			
Accounts receivable	537	(14,186)	(7,577)
Inventories	6,675	(7,340)	(3,713)
Prepaid expenses and other current assets	3,398	(5,787)	3,164
Pension plan funding	(16,963)	(6,650)	(8,466)
Accounts payable	(5,231)	24,824	6,351
Restructuring liabilities	(1,103)	(2,550)	(4,741)
Income taxes payable	3,748	(712)	6,829
Tax benefits related to stock incentive programs	513	166	136
Other	11,417	7,723	7,758
Net cash provided by operations	<u>139,918</u>	<u>133,659</u>	<u>142,419</u>
<b>Investing Activities</b>			
Purchases of property, plant and equipment	(52,130)	(52,060)	(34,518)
Purchases of short-term investments	(5,390)	(12,423)	(10,738)
Proceeds from sales of short-term investments	9,310	9,380	4,125
Proceeds from disposal of property, plant and equipment	169	78	39
Net cash used in investing activities	<u>(48,041)</u>	<u>(55,025)</u>	<u>(41,092)</u>
<b>Financing Activities</b>			
Issuance of long-term debt	--	1,596	--
Repayment of long-term debt	(8,558)	(275)	(4,600)
Net issuance (repayment) of short-term debt	1,031	2,030	(1,331)
Purchase of common shares for treasury	(25,884)	(48,004)	(27,922)
Cash dividends paid	(4,409)	(3,601)	(3,720)
Proceeds from issuance of stock under option plan	8,173	5,912	1,086
Excess tax benefits related to stock incentive programs	313	6	53
Dividends to non-controlling shareholders	(4,645)	--	--
Net cash used in financing activities	<u>(33,979)</u>	<u>(42,336)</u>	<u>(36,434)</u>
Effect of exchange rate changes on cash and cash equivalents	1,042	(8,973)	(8,012)
Net increase in cash and cash equivalents	58,940	27,325	56,881
Cash and cash equivalents at beginning of year	395,152	367,827	310,946
Cash and cash equivalents at end of year	<u>\$ 454,092</u>	<u>\$ 395,152</u>	<u>\$ 367,827</u>
<b>Non-cash Investing and Financing Activities:</b>			
Treasury stock purchases settled after year-end	<u>\$ 1,771</u>	<u>\$ --</u>	<u>\$ 2,069</u>

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY**  
(in thousands)

	<u>Equity Attributable to MTI</u>						<u>Total</u>
	<u>Common Stock</u>	<u>Additional Paid-in Capital</u>	<u>Retained Earnings</u>	<u>Accumulated Other Comprehensive Income (Loss)</u>	<u>Treasury Stock</u>	<u>Non-controlling Interests</u>	
<i>Balance as of December 31, 2009</i>	\$ 4,650	\$ 316,494	\$ 836,062	\$ 3,193	\$ (436,238 )	\$ 23,582	\$ 747,743
Net income	--	--	66,869	--	--	3,017	69,886
Currency translation adjustment	--	--	--	(9,195 )	--	1,022	(8,173 )
Unamortized gains and prior service cost	--	--	--	347	--	--	347
Cash flow hedge:							
Net derivative losses arising during the year	--	--	--	2,020	--	--	2,020
Reclassification adjustment	--	--	--	45	--	--	45
Dividends declared	--	--	(3,720 )	--	--	--	(3,720 )
Dividends to non-controlling interests	--	--	--	--	--	(449 )	(449 )
Employee benefit transactions	9	1,231	--	--	--	--	1,240
Income tax benefit arising from employee							
stock option plans	--	189	--	--	--	--	189
Stock-based compensation	--	3,559	--	--	--	--	3,559
Purchase of common stock for treasury	--	--	--	--	(29,992 )	--	(29,992 )
<i>Balance as of December 31, 2010</i>	\$ 4,659	\$ 321,473	\$ 899,211	\$ (3,590 )	\$ (466,230 )	\$ 27,172	\$ 782,695
Net income	--	--	67,521	--	--	2,733	70,254
Sale of controlling interest	--	--	--	--	--	(820 )	(820 )
Currency translation adjustment	--	--	--	(16,687)	--	(878 )	(17,565 )
Unamortized losses and prior service cost	--	--	--	(25,630)	--	--	(25,630 )
Cash flow hedge:							
Net derivative losses arising during the year	--	--	--	529	--	--	529
Reclassification adjustment	--	--	--	47	--	--	47
Dividends declared	--	--	(3,602 )	--	--	--	(3,602 )
Dividends to non-controlling interests	--	--	--	--	--	(1,799 )	(1,799)
Employee benefit transactions	16	5,895	--	--	--	--	5,911
Income tax benefit arising from employee							
stock option plans	--	172	--	--	--	--	172
Stock-based compensation	--	5,832	--	--	--	--	5,832
Purchase of common stock for treasury	--	--	--	--	(48,004 )	--	(48,004 )
<i>Balance as of December 31, 2011</i>	\$ 4,675	\$ 333,372	\$ 963,130	\$ (45,331 )	\$ (514,234 )	\$ 26,408	\$ 768,020
Net income	--	--	74,147	--	--	2,122	76,269
Currency translation adjustment	--	--	--	2,056	--	(577 )	1,479
Unamortized losses and prior service cost	--	--	--	(7,730)	--	--	(7,730)
Cash flow hedge:							
Net derivative gains arising during the year	--	--	--	(204)	--	--	(204 )
Reclassification adjustment	--	--	--	11	--	--	11
Dividends declared	--	--	(4,408 )	--	--	--	(4,408)
Capital contributions by non-controlling interests	--	--	--	--	--	808	808
Dividends to non-controlling interests	--	--	--	--	--	(5,453 )	(5,453)
Employee benefit transactions	25	8,148	--	--	--	--	8,173
Income tax benefit arising from employee							
stock option plans	--	826	--	--	--	--	826
Stock-based compensation	--	3,583	--	--	--	--	3,583
Purchase of common stock for treasury	--	--	--	--	(27,655 )	--	(27,655 )
<i>Balance as of December 31, 2012</i>	\$ 4,700	\$ 345,929	\$ 1,032,869	\$ (51,198 )	\$ (541,889 )	\$ 23,308	\$ 813,719

See Notes to Consolidated Financial Statements, which are an integral part of these statements .



**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. Summary of Significant Accounting Policies**

*Basis of Presentation*

The accompanying consolidated financial statements include the accounts of Minerals Technologies Inc. (the "Company") and its wholly and majority-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Certain reclassifications were made to prior year amounts to conform to current year presentation.

*Use of Estimates*

The Company employs accounting policies that are in accordance with U.S. generally accepted accounting principles and require management to make estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reported period. Significant estimates include those related to allowance for doubtful accounts, valuation of inventories, valuation of long-lived assets, goodwill and other intangible assets, pension plan assumptions, income tax, valuation allowances, and litigation and environmental liabilities. Actual results could differ from those estimates.

*Business*

The Company is a resource- and technology-based company that develops, produces and markets on a worldwide basis a broad range of specialty mineral, mineral-based products and related systems and technologies. The Company's products are used in the manufacturing processes of the paper and steel industries, as well as by the building materials, polymers, ceramics, paints and coatings, and other manufacturing industries.

*Cash Equivalents and Short-term Investments*

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. Short-term investments consist of financial instruments with original maturities beyond three months, but less than twelve months. Short-term investments amounted to \$14.2 million and \$18.5 million at December 31, 2012 and 2011, respectively.

*Trade Accounts Receivable*

Trade accounts receivables are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in the Company's existing accounts receivable. The Company determines the allowance based on historical write-off experience and specific allowances for bankrupt customers. The Company also analyzes the collection history and financial condition of its other customers, considering current industry conditions and determines whether an allowance needs to be established. The Company reviews its allowance for doubtful accounts monthly. Past due balances over 90 days based on payment terms are reviewed individually for collectability. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. The Company does not have any off-balance-sheet credit exposure related to its customers.

*Inventories*

Inventories are valued at the lower of cost or market. Cost is determined by the first-in, first-out (FIFO) method.

Additionally, items such as idle facility expense, excessive spoilage, freight handling costs, and re-handling costs are recognized as current period charges. The allocation of fixed production overheads to the costs of conversion are based upon the normal capacity of the production facility. Fixed overhead costs associated with idle capacity are expensed as incurred.

*Property, Plant and Equipment*

Property, plant and equipment are recorded at cost. Significant improvements are capitalized, while maintenance and repair expenditures are charged to operations as incurred. The Company capitalizes interest cost as a component of construction in progress. In general, the straight-line method of depreciation is used for financial reporting purposes. The annual rates of depreciation are 3% - 6.67% for buildings, 6.67% - 12.5% for machinery and equipment, 8% - 12.5% for furniture and fixtures and 12.5% - 25% for computer equipment and software-related assets. The estimated useful lives of our PCC production facilities and machinery and equipment pertaining to our natural stone mining and processing plants and our chemical plants are 15 years.

Property, plant and equipment are depreciated over their useful lives. Useful lives are based on management's estimates of the period that the assets can generate revenue, which does not necessarily coincide with the remaining term of a customer's contractual obligation to purchase products made using those assets. The Company's sales of PCC are predominantly pursuant to long-term evergreen contracts, initially ten years in length, with paper mills at which the Company operates satellite PCC plants. The terms of many of these agreements have been extended, often in connection with an expansion of

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

the satellite PCC plant. Failure of a PCC customer to renew an agreement or continue to purchase PCC from a Company facility could result in an impairment of assets charge or accelerated depreciation at such facility.

Depletion of mineral reserves is determined on a unit-of-extraction basis for financial reporting purposes, based upon proven and probable reserves, and on a percentage depletion basis for tax purposes.

*Stripping Costs Incurred During Production*

Stripping costs are those costs incurred for the removal of waste materials for the purpose of accessing ore body that will be produced commercially. Stripping costs incurred during the production phase of a mine are variable costs that are included in the costs of inventory produced during the period that the stripping costs are incurred.

*Accounting for the Impairment of Long-Lived Assets*

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, the Company estimates the undiscounted future cash flows (excluding interest), resulting from the use of the asset and its ultimate disposition. If the sum of the undiscounted cash flows (excluding interest) is less than the carrying value, the Company recognizes an impairment loss, measured as the amount by which the carrying value exceeds the fair value of the asset, determined principally using discounted cash flows.

*Goodwill and Other Intangible Assets*

Goodwill represents the excess of purchase price and related costs over the value assigned to the net tangible and identifiable intangible assets of businesses acquired. Goodwill is not amortized, but instead assessed for impairment. Intangible assets with estimable useful lives are amortized over their respective estimated lives to the estimated residual values, and reviewed for impairment.

The Company performs a qualitative assessment for each of its reporting units to determine if the two step process for impairment testing was required. If the Company determines that it was more likely than not that the fair value of a reporting unit was less than its carrying amount, the Company would then have evaluated the recoverability of goodwill using a two-step impairment test approach at the reporting unit level. In the first step, the fair value for the reporting unit is compared to its book value including goodwill. In the case that the fair value of the reporting unit is less than book value, a second step is performed which compares the fair value of the reporting unit's goodwill to the book value of the goodwill. The fair value for the goodwill is determined based on the difference between the fair values of the reporting unit and the net fair values of the identifiable assets and liabilities of such reporting unit. If the fair value of the goodwill is less than the book value, the difference is recognized as an impairment.

*Accounting for Asset Retirement Obligations*

The Company provides for obligations associated with the retirement of long-lived assets and the associated asset retirement costs. The fair value of a liability for an asset retirement obligation is recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. The associated asset retirement costs are capitalized as part of the carrying amount of the long-lived asset. The Company also provides for legal obligations to perform asset retirement activities where timing or methods of settlement are conditional on future events.

*Fair Value of Financial Instruments*

The recorded amounts of cash and cash equivalents, receivables, short-term borrowings, accounts payable, accrued interest, and variable-rate long-term debt approximate fair value because of the short maturity of those instruments or the variable nature of underlying interest rates. Short-term investments are recorded at cost, which approximates fair market value.

*Derivative Financial Instruments*

The Company records derivative financial instruments which are used to hedge certain foreign exchange risk at fair value on the balance sheet. See Note 9 for a full description of the Company's hedging activities and related accounting policies.

*Revenue Recognition*

Revenue from sale of products is recognized at the time the goods are shipped and title passes to the customer. In most of the Company's PCC contracts, the price per ton is based upon the total number of tons sold to the customer during the year. Under those contracts the price billed to the customer for shipments during the year is based on periodic estimates of the total annual volume that will be sold to such customer. Revenues are adjusted at the end of each year to reflect the actual volume sold. The Company also has consignment arrangements with certain customers in our Refractories segment. Revenues for these transactions are recorded when the consigned products are consumed by the customer.

Revenues from sales of equipment are recorded upon completion of installation and receipt of customer acceptance. Revenues from services are recorded when the services have been performed.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

*Foreign Currency*

The assets and liabilities of the Company's international subsidiaries are translated into U.S. dollars using exchange rates at the respective balance sheet date. The resulting translation adjustments are recorded in accumulated other comprehensive income (loss) in shareholders' equity. Income statement items are generally translated at monthly average exchange rates prevailing during the period. International subsidiaries operating in highly inflationary economies translate non-monetary assets at historical rates, while net monetary assets are translated at current rates, with the resulting translation adjustments included in net income. At December 31, 2012, the Company had no international subsidiaries operating in highly inflationary economies.

*Income Taxes*

Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The Company operates in multiple taxing jurisdictions, both within the U.S. and outside the U.S. In certain situations, a taxing authority may challenge positions that the Company has adopted in its income tax filings. The Company regularly assesses its tax position for such transactions and includes reserves for those differences in position. The reserves are utilized or reversed once the statute of limitations has expired or the matter is otherwise resolved.

The application of income tax law is inherently complex. Laws and regulations in this area are voluminous and are often ambiguous. As such, we are required to make many subjective assumptions and judgments regarding our income tax exposures. Interpretations of and guidance surrounding income tax laws and regulations change over time. As such, changes in our subjective assumptions and judgments can materially affect amounts recognized in the consolidated balance sheets and statements of operations. The Company's accounting policy is to recognize interest and penalties as part of its provision for income taxes. See Note 4 to the consolidated financial statements, "Income Taxes," for additional detail on our uncertain tax positions.

The accompanying financial statements generally do not include a provision for U.S. income taxes on international subsidiaries' unremitted earnings, which are expected to be permanently reinvested overseas.

*Research and Development Expenses*

Research and development expenses are expensed as incurred.

*Accounting for Stock-Based Compensation*

The Company recognizes compensation expense for share-based awards based upon the grant date fair value over the vesting period.

*Pension and Post-retirement Benefits*

The Company has defined benefit pension plans covering the majority of its employees. The benefits are generally based on years of service and an employee's modified career earnings.

The Company also provides post-retirement healthcare benefits for the majority of its retirees and employees in the United States. The Company measures the costs of its obligation based on its best estimate. The net periodic costs are recognized as employees render the services necessary to earn the post-retirement benefits.

*Environmental*

Expenditures that relate to current operations are expensed or capitalized as appropriate. Expenditures that relate to an existing condition caused by past operations and which do not contribute to current or future revenue generation are expensed. Liabilities are recorded when it is probable the Company will be obligated to pay amounts for environmental site evaluation, remediation or related costs, and such amounts can be reasonably estimated.

*Earnings Per Share*

Basic earnings per share have been computed based upon the weighted average number of common shares outstanding during the period.

Diluted earnings per share have been computed based upon the weighted average number of common shares outstanding during the period assuming the issuance of common shares for all potentially dilutive common shares outstanding.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

*Subsequent events*

The Company has evaluated for subsequent events through the date of issuance of its financial statements.

*Stock Split*

On November 14, 2012 the Company's Board of Directors authorized a two-for-one stock split of the of the Company's outstanding common stock, which was effected in the form of a 100-percent stock distribution payable on December 11, 2012 to shareholders of record on November 27, 2012. Treasury shares were not treated as outstanding shares in the stock split. The par-value of the Company's stock remained at \$0.10 per share. Unless otherwise noted, all share amounts and per share calculations have been adjusted for all periods presented to reflect the impact of this split and to provide data on a comparable basis.

**Note 2. Stock-Based Compensation**

The Company has a 2001 Stock Award and Incentive Plan (the "Plan"), which provides for grants of incentive and non-qualified stock options, restricted stock, stock appreciation rights, stock awards or performance unit awards. The Plan is administered by the Compensation Committee of the Board of Directors. Stock options granted under the Plan generally have a ten year term. The exercise price for stock options are at prices at or above the fair market value of the common stock on the date of the grant, and each award of stock options will vest ratably over a specified period, generally three years.

Stock-based compensation expense is recognized in the consolidated financial statements for stock options based on the grant date fair value.

Net income for years ended 2012, 2011 and 2010 include \$2.0 million, \$2.7 million and \$2.0 million pre-tax compensation costs, respectively, related to stock option expense as a component of marketing and administrative expenses. All stock option expense is recognized in the consolidated statements of operations. The related tax benefit included in the statement of income on the non-qualified stock options was \$0.8 million, \$1.1 million and \$0.8 million for 2012, 2011 and 2010, respectively.

The benefits of tax deductions in excess of the tax benefit from compensation costs that were recognized or would have been recognized are classified as financing inflows on the consolidated statement of cash flows.

*Stock Options*

The fair value of options granted is estimated on the date of grant using the Black-Scholes valuation model. Compensation expense is recognized only for those options expected to vest, with forfeitures estimated at the date of grant based on the Company's historical experience and future expectations. The forfeiture rate assumption used for the period ended December 31, 2012 was 7.31%.

The weighted average grant date fair value for stock options granted during the years ended December 31, 2012, 2011 and 2010 was \$10.74, \$11.03 and \$8.16, respectively. The weighted average grant date fair value for stock options vested during 2012, 2011 and 2010 was \$8.57, \$7.58 and \$8.50, respectively. The total intrinsic value of stock options exercised during the years ended December 31, 2012, 2011 and 2010 was \$3.3 million, \$1.7 million and \$0.5 million, respectively.

The fair value for stock awards was estimated at the date of grant using the Black-Scholes option valuation model with the following weighted average assumptions for the years ended December 31, 2012, 2011 and 2010:

	2012	2011	2010
Expected life (years)	6.9	6.3	6.3
Interest rate	1.36%	2.46%	2.92%
Volatility	31.26%	30.93%	28.80%
E x p e c t e d d i v i d e n d yield	0.31%	0.31%	0.41%

The expected term of the options represents the estimated period of time until exercise and is based on historical experience of similar awards, based upon contractual terms, vesting schedules, and expectations of future employee behavior. The expected stock-price volatility is based upon the historical and implied volatility of the Company's stock. The interest rate is based upon the implied yield on U.S. Treasury bills with an equivalent remaining term. Estimated dividend yield is based upon historical dividends paid by the Company.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The following table summarizes stock option activity for the year ended December 31, 2012:

	Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (in thousands)
Balance December 31, 2011	1,573,974	\$ 27.10		
Granted	222,250	32.04		
Exercised	(330,158)	25.15		
Canceled	(70,546)	27.76		
Balance December 31, 2012	<u>1,395,520</u>	<u>\$ 28.31</u>	<u>5.93</u>	<u>\$ 16,201</u>
Exercisable, December 31, 2012	<u>1,068,434</u>	<u>\$ 27.44</u>	<u>5.11</u>	<u>\$ 13,337</u>

The aggregate intrinsic value above is calculated before applicable income taxes, based on the Company's closing stock price of \$39.92 as of the last business day of the period ended December 31, 2012 had all options been exercised on that date. The weighted average intrinsic value of the options exercised during 2012, 2011 and 2010 was \$10.11, \$7.15 and \$8.03 per share, respectively. As of December 31, 2012, total unrecognized stock-based compensation expense related to non-vested stock options was approximately \$1.5 million, which is expected to be recognized over a weighted average period of approximately three years.

The Company issues new shares of common stock upon the exercise of stock options.

Non-vested stock option activity for the year ended December 31, 2012 is as follows:

	Shares	Weighted Average Exercise Price Per Share
Non-vested options outstanding at December 31, 2011	454,634	\$ 27.14
Options granted	222,250	32.04
Options vested	(311,152)	25.98
Options forfeited ...	(38,646)	30.63
Non-vested options outstanding at December 31, 2012	<u>327,086</u>	<u>\$ 31.17</u>

The following table summarizes additional information concerning options outstanding at December 31, 2012:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding at 12/31/12	Weighted Average Remaining Contractual Term (Years)	Weighted Average Exercise Price	Number Exercisable at 12/31/12	Weighted Average Exercise Price
\$ 19.855 - \$ 24.753	413,026	3.5	\$ 22.14	376,530	\$ 21.90
\$ 26.257 - \$ 29.665	153,718	2.1	\$ 27.08	148,706	\$ 27.08
\$ 30.097 - \$ 34.657	828,776	6.3	\$ 31.61	543,198	\$ 31.37
\$ 19.855 - \$ 34.657	<u>1,395,520</u>	<u>4.0</u>	<u>\$ 28.31</u>	<u>1,068,434</u>	<u>\$ 27.44</u>

*Restricted Stock*

The Company has granted key employees rights to receive shares of the Company's common stock under the Company's 2001 Stock Award and Incentive Plan (the "Plan"). The rights will be deferred for a specified number of years of service, subject to restrictions on transfer and other conditions. Compensation expense for these shares is recognized over the vesting period. The Company granted 123,446 shares, 136,978 shares and 156,640 shares for the periods ended December 31, 2012, 2011 and 2010, respectively. The fair value was determined based on the market value of unrestricted shares. As of December 31, 2012, there was unrecognized stock-based compensation related to restricted stock of \$2.7 million, which will be recognized over approximately the next three years. The compensation expense amortized with respect to all units was approximately \$3.4 million, \$4.6 million and \$3.8 million for the periods ended December 31, 2012, 2011 and 2010, respectively. In addition, the Company recorded reversals of \$-- million, \$0.1 million and \$0.1 million for periods ended December 31, 2012, 2011 and 2010, respectively, related to restricted stock forfeitures. Such costs and reversals are included in marketing and administrative expenses. There were 102,424 restricted stock shares that vested for the year ended December 31, 2012.



**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The following table summarizes the restricted stock activity for the Plan:

	Shares	Weighted Average Grant Date Fair Value
Unvested balance at December 31, 2011	252,024	\$ 27.21
Granted	123,446	\$ 32.04
Vested	(102,424)	\$ 25.90
Canceled	(89,386)	\$ 27.08
Unvested balance at December 31, 2012	<u>183,660</u>	<u>\$ 31.25</u>

**Note 3. Earnings Per Share (EPS)**

(thousands, except per share amounts)

	2012	2011	2010
<b>Basic EPS</b>			
Net income attributable to MTI	<u>\$ 74,147</u>	<u>\$ 67,521</u>	<u>\$ 66,869</u>
Weighted average shares outstanding	35,340	36,018	37,228
Basic earnings per share attributable to MTI	<u>\$ 2.10</u>	<u>\$ 1.87</u>	<u>\$ 1.80</u>

**Diluted EPS**

	2012	2011	2010
Net income attributable to MTI	<u>\$ 74,147</u>	<u>\$ 67,521</u>	<u>\$ 66,869</u>
Weighted average shares outstanding	35,340	36,018	37,228
Dilutive effect of stock options	189	218	158
Weighted average shares outstanding, adjusted	<u>35,529</u>	<u>36,236</u>	<u>37,386</u>
Diluted earnings per share	<u>\$ 2.09</u>	<u>\$ 1.86</u>	<u>\$ 1.79</u>

Options to purchase 2,404 shares, 218,064 shares and 193,602 shares of common stock for the years ended December 31, 2012, December 31, 2011 and December 31, 2010, respectively, were not included in the computation of diluted earnings per share because they were anti-dilutive, as the exercise prices of the options were greater than the average market price of the common shares.

**Note 4. Income Taxes**

Income from operations before provision for taxes by domestic and foreign source is as follows:

Thousands of Dollars	2012	2011	2010
Domestic	\$ 56,905	\$ 46,950	\$ 49,484
Foreign	50,141	50,790	49,365
Income from operations before provision for income taxes	<u>\$ 107,046</u>	<u>\$ 97,740</u>	<u>\$ 98,849</u>

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The provision (benefit) for taxes on income consists of the following:

Thousands of Dollars	2012	2011	2010
<b>Domestic</b>			
Taxes currently payable			
Federal	\$ 14,838	\$ 11,793	\$ 12,287
State and local	1,318	2,145	1,861
Deferred income taxes	3,236	(1,886)	411
Domestic tax provision	<u>19,392</u>	<u>12,052</u>	<u>14,559</u>
<b>Foreign</b>			
Taxes currently payable	13,364	12,297	13,043
Deferred income taxes	(1,979)	3,136	1,361
Foreign tax provision	<u>11,385</u>	<u>15,433</u>	<u>14,404</u>
<b>Total tax provision</b>	<u>\$ 30,777</u>	<u>\$ 27,486</u>	<u>\$ 28,963</u>

The provision for taxes on income shown in the previous table is classified based on the location of the taxing authority, regardless of the location in which the taxable income is generated.

The major elements contributing to the difference between the U.S. federal statutory tax rate and the consolidated effective tax rate are as follows:

Percentages	2012	2011	2010
U.S. statutory tax rate	35.0%	35.0%	35.0%
Depletion	(3.9)	(4.1)	(3.8)
Difference between tax provided on foreign earnings and the U.S. statutory rate	(4.1)	(1.0)	(3.1)
Change in Mexican law	(0.5)	(0.2)	0.3
State and local taxes, net of Federal tax benefit	1.5	1.2	1.2
Tax credits and foreign dividends	(0.1)	(0.1)	(0.1)
Change in valuation allowance	(1.1)	(1.2)	(0.1)
Impact of uncertain tax positions	0.9	(2.8)	(1.5)
Impact of officer's non-deductible compensation	2.1	2.9	1.2
Other	(1.1)	(1.6)	0.2
Consolidated effective tax rate	<u>28.8%</u>	<u>28.1%</u>	<u>29.3%</u>

The Company believes that its accrued liabilities are sufficient to cover its U.S. and foreign tax contingencies. The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below:

Thousands of Dollars	2012	2011
Deferred tax assets:		
Accrued expenses	\$ 12,200	\$ 9,752
Net operating loss carry forwards	11,414	11,083
Pension and post-retirement benefits costs	43,828	40,584
Other	12,850	11,163
Valuation allowance.	(5,666)	(6,860)
Total deferred tax assets	<u>\$ 74,626</u>	<u>\$ 65,722</u>

Thousands of Dollars	2012	2011
Deferred tax liabilities:		
Plant and equipment, principally due to differences in depreciation	\$ 10,333	\$ 4,832
Intangible assets	12,412	11,387
Mexican tax recapture	429	1,021
Other	3,983	4,067
Total deferred tax liabilities	<u>27,157</u>	<u>21,307</u>
Net deferred tax assets	<u>\$ 47,469</u>	<u>\$ 44,415</u>





**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The current and long-term portion of net deferred tax assets is as follows:

Thousands of Dollars	2012	2011
Net deferred tax assets, current	\$ 6,253	\$ 4,903
Net deferred assets, long term	41,216	39,512
	<u>\$ 47,469</u>	<u>\$ 44,415</u>

The current portion of the net deferred tax assets is included in prepaid expenses and other current assets. The long-term portion of the net deferred tax assets are included in other assets and deferred charges.

The Company has \$7.2 million of deferred tax assets arising from tax loss carry forwards which will be realized through future operations. Carry forwards of approximately \$2.9 million expire over the next 20 years, and \$4.3 million can be utilized over an indefinite period.

On December 31, 2012, the Company had \$4.8 million of total unrecognized tax benefits. Included in this amount were a total of \$3.1 million of unrecognized income tax benefits that, if recognized, would affect the Company's effective tax rate. While it is expected that the amount of unrecognized tax benefits will change in the next 12 months, we do not expect the change to have a significant impact on the results of operations or the financial position of the Company.

The following table summarizes the activity related to our unrecognized tax benefits:

(Thousands of Dollars)	2012	2011
Balance as of January 1, 2012	\$ 3,912	\$ 6,473
Increases related to current year positions	696	563
Increases (decreases) related to new judgments	206	(373)
Decreases related to audit settlements and statute expirations	--	(2,751)
Other	--	--
Balance as of December 31, 2012	<u>\$ 4,814</u>	<u>\$ 3,912</u>

The Company's accounting policy is to recognize interest and penalties accrued, relating to unrecognized income tax benefits as part of its provision for income taxes. The Company had recorded \$0.3 million of interest and penalties during 2012 and had a total accrued balance on December 31, 2012 of \$1.0 million.

The Company operates in multiple taxing jurisdictions, both within and outside the U.S. In certain situations, a taxing authority may challenge positions that the Company has adopted in its income tax filings. The Company, with a few exceptions (none of which are material), is no longer subject to U.S. federal, state, local, and European income tax examinations by tax authorities for years prior to 2006.

Net cash paid for income taxes were \$21.5 million, \$31.9 million and \$24.9 million for the years ended December 31, 2012, 2011 and 2010, respectively.

The Company has not provided for U.S. federal and foreign withholding taxes on \$334.6 million of foreign subsidiaries' undistributed earnings as of December 31, 2012 because such earnings are intended to be permanently reinvested overseas. To the extent the parent company has received foreign earnings as dividends; the foreign taxes paid on those earnings have generated tax credits, which have substantially offset related U.S. income taxes. However, in the event that the entire \$334.6 million of foreign earnings were to be repatriated, incremental taxes may be incurred. We do not believe this amount would be more than \$50.2 million.

**Note 5. Inventories**

The following is a summary of inventories by major category:

Thousands of Dollars	2012	2011
Raw materials	\$ 30,822	\$ 38,510
Work in process	6,465	6,044
Finished goods	26,485	26,055
Packaging and supplies	20,797	20,151
Total inventories	<u>\$ 84,569</u>	<u>\$ 90,760</u>

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**Note 6. Property, Plant and Equipment**

The major categories of property, plant and equipment and accumulated depreciation and depletion are presented below:

Thousands of Dollars	2012	2011
Land	\$ 26,467	\$ 27,370
Quarries/mining properties	39,596	39,596
Buildings	145,082	147,115
Machinery and equipment	937,559	911,753
Construction in progress	27,805	31,060
Furniture and fixtures and other	85,443	91,755
	<u>1,261,952</u>	<u>1,248,649</u>
Less: Accumulated depreciation and depletion	(944,283)	(930,515)
Property, plant and equipment, net	<u>\$ 317,669</u>	<u>\$ 318,134</u>

Depreciation and depletion expense for the years ended December 31, 2012, 2011 and 2010 was \$48.7 million, \$55.9 million and \$61.2 million, respectively.

**Note 7. Restructuring Costs**

The Company initiated restructuring programs in 2007, 2009, and 2011. A reconciliation of the remaining restructuring liability relating to those programs as of December 31, 2012, is as follows:

(millions of dollars)	Balance as of December 31, 2011	Additional Provisions (Reversals)	Cash Expenditures	Balance as of December 31, 2012
Contract termination costs	\$ 0.8	\$ --	\$ (0.6)	\$ 0.2
Severance and other employee benefits	0.6	--	(0.5)	0.1
	<u>\$ 1.4</u>	<u>\$ --</u>	<u>\$ (1.1)</u>	<u>\$ 0.3</u>

Approximately \$1.1 million and \$2.5 million in restructuring payments were paid in 2012 and 2011, respectively. A restructuring liability of \$0.3 million remains at December 31, 2012. Such amounts will be funded from operating cash flows.

**Note 8. Goodwill and Other Intangible Assets**

The carrying amount of goodwill was \$65.8 million and \$64.7 million as of December 31, 2012 and December 31, 2011, respectively. The net change in goodwill since December 31, 2011 was attributable to the effects of foreign exchange.

Acquired intangible assets subject to amortization included in other assets and deferred charges as of December 31, 2012 and December 31, 2011 was as follows:

(Millions of Dollars)	December 31, 2012		December 31, 2011	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents and trademarks	\$ 6.2	\$ 4.3	\$ 6.2	\$ 4.0
Customer lists	2.7	1.5	2.7	1.5
	<u>\$ 8.9</u>	<u>\$ 5.8</u>	<u>\$ 8.9</u>	<u>\$ 5.5</u>

The weighted average amortization period for acquired intangible assets subject to amortization is approximately 15 years. Amortization expense was approximately \$0.6 million, \$0.8 million and \$0.5 million for the years ended December 31, 2012, 2011 and 2010, respectively. The estimated amortization expense is \$0.6 million for 2013 and \$0.4 million for each of the next four years through 2017.

Included in other assets and deferred charges is an additional intangible asset of approximately \$0.5 million which represents the non-current unamortized amount paid to a customer in connection with contract extensions at seven satellite PCC facilities. In addition, a current portion of \$0.4 million is included in prepaid expenses and other current assets. Such amounts will be amortized as a reduction of sales over the remaining lives of the customer contracts. Approximately \$0.4 million, \$0.7 million and \$1.0 million was amortized in 2012, 2011 and 2010, respectively. Estimated amortization as a reduction of sales is as follows: 2013 - \$0.4 million; 2014 - \$0.4 million; 2015 - \$0.1 million.

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**Note 9. Derivative Financial Instruments and Hedging Activities**

The Company is exposed to foreign currency exchange rate fluctuations. As part of its risk management strategy, the Company uses forward exchange contracts (FEC) to manage its exposure to foreign currency risk on certain raw material purchases. The Company's objective is to offset gains and losses resulting from these exposures with gains and losses on the derivative contracts used to hedge them. The Company has not entered into derivative instruments for any purpose other than to hedge certain expected cash flows. The Company does not speculate using derivative instruments.

By using derivative financial instruments to hedge exposures to changes in interest rates and foreign currencies, the Company exposes itself to credit risk and market risk. Credit risk is the risk that the counterparty will fail to perform under the terms of the derivative contract. When the fair value of a derivative contract is positive, the counterparty owes the Company, which creates credit risk for the Company. When the fair value of a derivative contract is negative, the Company owes the counterparty, and therefore, it does not face any credit risk. The Company minimizes the credit risk in derivative instruments by entering into transactions with major financial institutions.

Market risk is the adverse effect on the value of a financial instrument that results from a change in interest rates, currency exchange rates, or commodity prices. The market risk associated with interest rate and forward exchange contracts is managed by establishing and monitoring parameters that limit the types and degree of market risk that may be undertaken.

Based on established criteria, the Company designated its derivatives as cash flow hedges. The Company uses FEC's designated as cash flow hedges to protect against foreign currency exchange rate risks inherent in its forecasted inventory purchases. The Company had 3 open foreign exchange contracts as of December 31, 2012.

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative instrument is initially recorded in accumulated other comprehensive income (loss) as a separate component of shareholders' equity and subsequently reclassified into earnings in the period during which the hedged transaction is recognized in earnings. The gains and losses associated with these forward exchange contracts are recognized into cost of sales. Gains and losses and hedge ineffectiveness associated with these derivatives were not significant.

The location and amounts of derivative fair values on the Consolidated Balance Sheets as of December 31, 2012 and December 31, 2011 were as follows:

(in thousands)

	<b>Asset Derivatives</b>			<b>Liability Derivatives</b>		
	Balance Sheet Location	Dec. 31, 2012	Dec. 31, 2011	Balance Sheet Location	Dec. 31, 2012	Dec. 31, 2011
Foreign Exchange Forwards	Other Current Assets	\$ 3,183	\$ 3,537	Other Current Liabilities	\$ --	\$ 31

Refer to Note 11, "Fair Value of Financial Instruments" for further discussion of the determination of the fair value of derivatives.

**Note 10. Short-term Investments**

The composition of the Company's short-term investments is as follows:

<b>(in millions of dollars)</b>	<b>2012</b>	<b>2011</b>
Short-term Investments		
Short-term bank deposits	\$ <u>14.2</u>	\$ <u>18.5</u>

There were no unrealized holding gains and losses on the short-term bank deposits held at December 31, 2012.

**Note 11. Fair Value of Financial Instruments**

Fair value is an exchange price that would be received for an asset or paid to transfer a liability (exit price) in an orderly transaction between market participants at the measurement date. The Company utilizes market data or assumptions that market participants would use in pricing the asset or liability. The Company follows a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or

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indirectly observable; and Level 3, defined as unobservable inputs about which little or no market data exists, therefore requiring an entity to develop its own assumptions.

Assets and liabilities measured at fair value are based on one or more of three valuation techniques. The three valuation techniques are as follows:

- Market approach - prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.
- Cost approach - amount that would be required to replace the service capacity of an asset or replacement cost.
- Income approach - techniques to convert future amounts to a single present amount based on market expectations, including present value techniques, option-pricing and other models.

The Company primarily applies the income approach for foreign exchange derivatives for recurring fair value measurements and attempts to utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs.

As of December 31, 2012, the Company held certain financial assets and liabilities that were required to be measured at fair value on a recurring basis. These consisted of the Company's derivative instruments related to foreign exchange rates and certain investment in money market funds. The fair values of foreign exchange rate derivatives are determined based on inputs that are readily available in public markets or can be derived from information available in publicly quoted markets and are categorized as Level 2. The fair values of investments in money market funds are determined by quoted prices in active markets and are categorized as level 1. The Company does not have any financial assets or liabilities measured at fair value on a recurring basis categorized as Level 3 and there were no transfers in or out of Level 3 during the year ended December 31, 2012. There were also no changes to the Company's valuation techniques used to measure asset and liability fair values on a recurring basis.

The following table sets forth by level within the fair value hierarchy the Company's financial assets and liabilities accounted for at fair value on a recurring basis as of December 31, 2012. Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment, and may affect the valuation of fair value assets and liabilities and their placement within the fair value hierarchy levels.

(in millions of dollars)	Assets (Liabilities) at Fair Value as of December 31, 2012		
	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Forward exchange contracts	\$ --	\$ 3.2	\$ --
Money market funds	\$ 174.7	\$ --	\$ --
Total	<u>\$ 174.7</u>	<u>\$ 3.2</u>	<u>\$ --</u>

The following table sets forth by level within the fair value hierarchy the Company's financial assets and liabilities accounted for at fair value on a recurring basis as of December 31, 2011

(in millions of dollars)	Assets (Liabilities) at Fair Value as of December 31, 2011		
	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Forward exchange contracts	\$ --	\$ 3.5	\$ --
Money market funds	\$ 134.7	\$ --	\$ --
Total	<u>\$ 134.7</u>	<u>\$ 3.5</u>	<u>\$ --</u>

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**Note 12. Financial Instruments and Concentrations of Credit Risk**

The following methods and assumptions were used to estimate the fair value of each class of financial instrument:

*Cash and cash equivalents, short-term investments, accounts receivable and payable* : The carrying amounts approximate fair value because of the short maturities of these instruments.

*Short-term debt and other liabilities* : The carrying amounts of short-term debt and other liabilities approximate fair value because of the short maturities of these instruments.

*Long-term debt*: The fair value of the long-term debt of the Company is estimated based on the quoted market prices for that debt or similar debt and approximates the carrying amount.

*Forward exchange contracts*: The fair value of forward exchange contracts (used for hedging purposes) is based on information derived from active markets. If appropriate, the Company would enter into forward exchange contracts to mitigate the impact of foreign exchange rate movements on the Company's operating results. It does not engage in speculation. Such foreign exchange contracts would offset losses and gains on the assets, liabilities and transactions being hedged. At December 31, 2012, the Company had 3 open foreign exchange contracts with a financial institution to purchase approximately \$0.8 million of foreign currencies. These contracts mature in January and February 2013. The fair value of these instruments was an asset of less than \$0.1 million at December 31, 2012. The fair value of open foreign exchange contracts at December 31, 2011 was a liability of less than \$0.1 million .

Additionally, the Company has entered into forward contracts to sell 30 million Euros as a hedge of its net investment in Europe. These contracts mature in October 2013. The fair value of these instruments at December 31, 2012 and December 31, 2011 was an asset of \$3.2 million and \$3.5 million, respectively.

*Credit risk*: Substantially all of the Company's accounts receivables are due from companies in the paper, construction and steel industries. Credit risk results from the possibility that a loss may occur from the failure of another party to perform according to the terms of the contracts. The Company regularly monitors its credit risk exposures and takes steps to mitigate the likelihood of these exposures resulting in actual loss. The Company's extension of credit is based on an evaluation of the customer's financial condition and collateral is generally not required.

The Company's bad debt expense for the years ended December 31, 2012, 2011 and 2010 was \$1.0 million, \$0.9 million and \$0.1 million, respectively.

**Note 13. Long-Term Debt and Commitments**

The following is a summary of long term debt:

(thousands of dollars)	Dec. 31, 2012	Dec. 31, 2011
5.53% Series 2006A Senior Notes		
Due October 5, 2013	\$ 50,000	\$ 50,000
Floating Rate Series 2006A Senior Notes		
Due October 5, 2013 25,000	25,000	25,000
Variable/Fixed Rate Industrial		
Development Revenue Bonds Due August 1, 2012	--	8,000
Variable/Fixed Rate Industrial		
Development Revenue Bonds Series 1999 Due November 1, 2014	8,200	8,200
Installment obligations		
Due 2013	1,421	1,421
Other Borrowings		
Due 2014	834	1,380
Total	85,455	94,001
Less: Current maturities	76,977	8,552
Long-term debt	<u>\$ 8,478</u>	<u>\$ 85,449</u>

The Variable/Fixed Rate Industrial Development Revenue Bonds due August 1, 2012 are tax-exempt 15-year instruments that were issued on August 1, 1997 to finance the construction of a PCC plant in Courtland, Alabama. The bonds bear interest at either a variable rate or fixed rate, at the option of the Company. Interest is payable semi-annually under the fixed rate option and monthly under the variable rate option. The Company selected the variable rate option on these borrowings

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and the average interest rates were approximately 0.22% and 0.31% for the years ended December 31, 2012 and 2011, respectively. This obligation was repaid in August 2012.

The Variable/Fixed Rate Industrial Development Revenue Bonds due November 1, 2014 are tax-exempt 15-year instruments and were issued on November 30, 1999 to refinance the bonds issued in connection with the construction of a PCC plant in Jackson, Alabama. The bonds bear interest at either a variable rate or fixed rate at the option of the Company. Interest is payable semi-annually under the fixed rate option and monthly under the variable rate option. The Company selected the variable rate option on these borrowings and the average interest rates were approximately 0.22% and 0.31% for the years ended December 31, 2012 and 2011, respectively.

On May 31, 2003, the Company acquired land and limestone ore reserves from the Cushenbury Mine Trust for approximately \$17.5 million. Approximately \$6.1 million was paid at the closing and \$11.4 million was financed through an installment obligation. The interest rate on this obligation is approximately 4.25%. The remaining principal payment of \$1.4 million will be made in 2013.

On October 5, 2006, the Company, through private placement, entered into a Note Purchase Agreement and issued \$75 million aggregate principal amount unsecured senior notes. These notes consist of two tranches: \$50 million aggregate principal amount 5.53% Series 2006A Senior Notes (Tranche 1 Notes); and \$25 million aggregate principal amount Floating Rate Series 2006A Senior Notes (Tranche 2 Notes). Tranche 1 Notes bear interest of 5.53% per annum, payable semi-annually. Tranche 2 Notes bear floating rate interest, payable quarterly. The average interest rate on Tranche 2 for the years ended December 31, 2012 and December 31, 2011 was 0.92% and 0.77%, respectively. The principal payment for both tranches is due on October 5, 2013. The Company expects to refinance these notes.

In January 2011, the Company entered into a Renminbi ("RMB") denominated loan agreement at its Refractories facility in China with the Bank of America totaling RMB 10.6 million, or \$1.6 million. Principal of this loan is payable in installments over the next three years. Interest is payable semi-annually and is based upon the official RMB lending rate announced by the People's Bank of China. The average interest rate for the year ended December 31, 2012 was 7.4%.

The aggregate maturities of long-term debt are as follows: 2013 - \$77.0 million; 2014 - \$8.5 million; 2015 - \$-- million; 2016 - \$-- million; 2017 - \$-- million; thereafter - \$-- million.

The Company had available approximately \$190.7 million in uncommitted, short-term bank credit lines, of which \$7.1 million was in use at December 31, 2012.

Short-term borrowings as of December 31, 2012 and 2011 were \$7.1 million and \$5.8 million, respectively. The weighted average interest rate on short-term borrowings outstanding as of December 31, 2012 and 2011 was 5.8% and 5.3%, respectively.

During 2012, 2011 and 2010, respectively, the Company incurred interest costs of \$3.5 million, \$3.5 million and \$3.5 million including \$0.3 million, \$0.3 million and \$0.2 million, respectively, which were capitalized. Interest paid approximated the incurred interest cost.

**Note 14. Benefit Plans**

*Pension Plans and Other Postretirement Benefit Plans*

The Company and its subsidiaries have pension plans covering the majority of eligible employees on a contributory or non-contributory basis.

Benefits under defined benefit plans are generally based on years of service and an employee's career earnings. Employees generally become fully vested after five years.

The Company provides postretirement health care and life insurance benefits for the majority of its U.S. retired employees. Employees are generally eligible for benefits upon retirement and completion of a specified number of years of creditable service. The Company does not pre-fund these benefits and has the right to modify or terminate the plan in the future.

The funded status of the Company's pension plans and other postretirement benefit plans at December 31, 2012 and 2011 is as follows:

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*Obligations and Funded Status*

Millions of Dollars	<b>Pension Benefits</b>		<b>Post-retirement Benefits</b>	
	<b>2012</b>	<b>2011</b>	<b>2012</b>	<b>2011</b>
<b>Change in benefit obligation</b>				
Benefit obligation at beginning of year	\$ 271.9	\$ 226.5	\$ 14.4	\$ 15.6
Service cost	8.1	7.1	0.6	0.7
Interest cost	11.6	11.6	0.4	0.6
Actuarial (gain) loss	30.4	40.5	(4.2)	(2.1)
Benefits paid	(12.5)	(11.7)	(0.5)	(0.5)
Settlements	(0.6)	(1.5)	--	--
Foreign exchange impact	1.9	(0.6)	--	--
Other	0.6	0.0	--	--
Benefit obligation at end of year	<u>\$ 311.4</u>	<u>\$ 271.9</u>	<u>\$ 10.6</u>	<u>\$ 14.4</u>

Millions of Dollars	<b>Pension Benefits</b>		<b>Post-retirement Benefits</b>	
	<b>2012</b>	<b>2011</b>	<b>2012</b>	<b>2011</b>
<b>Change in plan assets</b>				
Fair value of plan assets beginning of year	\$ 187.5	\$ 191.6	\$ --	\$ --
Actual return on plan assets	17.2	3.1	--	--
Employer contributions	16.4	6.1	0.5	0.5
Plan participants' contributions	0.5	0.4	--	--
Benefits paid	(12.5)	(11.7)	(0.5)	(0.5)
Settlements	(0.6)	(1.5)	--	--
Foreign exchange impact	3.5	(0.5)	--	--
Fair value of plan assets at end of year	<u>\$ 212.0</u>	<u>\$ 187.5</u>	<u>\$ --</u>	<u>\$ --</u>
Funded status	<u>\$ (99.4)</u>	<u>\$ (84.4)</u>	<u>\$ 10.6</u>	<u>\$ (14.4)</u>

Amounts recognized in the consolidated balance sheet consist of:

Millions of Dollars	<b>Pension Benefits</b>		<b>Post-retirement Benefits</b>	
	<b>2012</b>	<b>2011</b>	<b>2012</b>	<b>2011</b>
Current liability	(0.3)	(0.4)	(1.0)	(1.2)
Non-current liability	(99.1)	(84.0)	(9.6)	(13.2)
Recognized liability	<u>\$ (99.4)</u>	<u>\$ (84.4)</u>	<u>\$ (10.6)</u>	<u>\$ (14.4)</u>

The current portion of pension liabilities is included in accrued compensation and related items.

Amounts recognized in accumulated other comprehensive income, net of related tax effects, consist of:

Millions of Dollars	<b>Pension Benefits</b>		<b>Post-retirement Benefits</b>	
	<b>2012</b>	<b>2011</b>	<b>2012</b>	<b>2011</b>
Net actuarial loss	\$ 93.7	\$ 84.7	\$ (10.1)	\$ 1.5
Prior service	3.0	2.9	(0.8)	(11.7)



cost

Amount recognized end of year	\$ 96.7	\$ 87.6	\$ (10.9)	\$ (10.2)
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The accumulated benefit obligation for all defined benefit pension plans was \$287.1 million and \$250.5 million at December 31, 2012 and 2011, respectively.

Changes in the Plan assets and benefit obligations recognized in other comprehensive income:

(Millions of Dollars)	Post Retirement	
	Pension Benefits	Benefits
Current year actuarial gain (loss)	\$ (17.6)	\$ 2.7
Amortization of actuarial loss	8.4	(0.1)
Amortization of prior service credit(gain) loss	0.7	(1.8)
Total recognized in other comprehensive income	\$ (8.5)	\$ 0.8

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The components of net periodic benefit costs are as follows:

Millions of Dollars	Pension Benefits			Post-retirement Benefits		
	2012	2011	2010	2012	2011	2010
Service cost	\$ 8.1	\$ 7.1	\$ 6.6	\$ 0.6	\$ 0.7	\$ 0.7
Interest cost	11.6	11.6	11.5	0.4	0.6	0.8
Expected return on plan assets	(13.5)	(13.8)	(12.6)	--	--	--
Amortization of prior service cost	1.2	1.3	1.4	(3.1)	(3.1)	(3.1)
Recognized net actuarial (gain) loss	13.3	8.6	8.4	(0.1)	0.1	0.4
Settlement /curtailment loss	0.2	0.5	--	--	--	--
Net periodic benefit cost	<u>\$ 20.9</u>	<u>\$ 15.3</u>	<u>\$ 15.3</u>	<u>\$ (2.2)</u>	<u>\$ (1.7)</u>	<u>\$ (1.2)</u>

Unrecognized prior service cost is amortized over the average remaining service period of each active employee.

The Company's funding policy for U.S. plans generally is to contribute annually into trust funds at a rate that provides for future plan benefits and maintains appropriate funded percentages. Annual contributions to the U.S. qualified plans are at least sufficient to satisfy regulatory funding standards and are not more than the maximum amount deductible for income tax purposes. The funding policies for the international plans conform to local governmental and tax requirements. The plans' assets are invested primarily in stocks and bonds.

The 2013 estimated amortization of amounts in other comprehensive income are as follows:

(Millions of Dollars)	Pension Benefits	Post Retirement Benefits
Amortization of prior service cost	\$ 1.0	\$ (3.1)
Amortization of net loss	14.1	--
Total costs to be recognized	<u>\$ 15.1</u>	<u>\$ (3.1)</u>

*Additional Information*

The weighted average assumptions used to determine net periodic benefit cost in the accounting for the pension benefit plans and other benefit plans for the years ended December 31, 2012, 2011 and 2010 are as follows:

	2012	2011	2010
Discount rate	4.32%	5.70%	5.75%
Expected return on plan assets	7.06%	7.25%	7.40%
Rate of compensation increase	3.11%	3.20%	3.50%

The weighted average assumptions used to determine benefit obligations for the pension benefit plans and other benefit plans at December 31, 2012, 2011 and 2010 are as follows:

	2012	2011	2010
Discount rate	3.77%	4.30%	5.70%
Rate of compensation increase	3.14%	3.10%	3.20%

For 2012, 2011 and 2010, the discount rate was based on a Citigroup yield curve of high quality corporate bonds with cash flows matching our plans' expected benefit payments. The expected return on plan assets is based on our asset allocation mix and our historical return, taking into account current and expected market conditions. The actual return on pension assets was approximately 9% in 2012, 2% in 2011 and 11% in 2010.

The Company maintains a self-funded health insurance plan for its retirees. This plan provided that the maximum health care cost trend rate would be 5%. Effective June 2010, the Company amended its plan to change the eligibility requirement for retirees and revised its plan so that increases in expected health care costs would be borne by the retiree.

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*Plan Assets*

The Company's pension plan weighted average asset allocation percentages at December 31, 2012 and 2011 by asset category are as follows:

<u>Asset Category</u>	<u>2012</u>	<u>2011</u>
Equity securities	56.4%	56.5%
Fixed income securities	34.9%	40.8%
Real estate	0.5%	0.1%
Other	8.2%	2.6%
Total	<u>100.0%</u>	<u>100.0%</u>

The Company's pension plan fair values at December 31, 2012 and 2011 by asset category are as follows:

Million of Dollars

<u>Asset Category</u>	<u>2012</u>	<u>2011</u>
Equity securities	\$ 119.5	\$ 106.1
Fixed income securities	74.1	76.4
Real estate	1.0	0.2
Other	17.4	4.8
Total	<u>\$ 212.0</u>	<u>187.5</u>

The following table presents domestic and foreign pension plan assets information at December 31, 2012, 2011 and 2010 (the measurement date of pension plan assets):

Millions of Dollars	<u>U.S. Plans</u>			<u>International Plans</u>		
	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Fair value of plan assets	\$ 148.2	\$ 132.2	\$ 138.1	\$ 63.8	\$ 55.3	\$ 53.5

The following table summarizes our defined benefit pension plan assets measured at fair value as of December 31, 2012:

Millions of Dollars

**Pension Assets at Fair Value as of December 31, 2012**

<u>Asset Class</u>	<u>Quoted Prices In Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>	<u>Total</u>
Equity Securities				
US equities	\$ 104.5	--	--	\$ 104.5
Non-US equities	15.0	--	--	15.0
Fixed Income Securities				
C o r p o r a t e d e b t instruments	43.1	31.0	--	74.1
Real estate and other				
Real estate		--	1.0	1.0
Other		--	17.4	17.4
Total Assets	<u>\$ 162.6</u>	<u>\$ 31.0</u>	<u>\$ 18.4</u>	<u>\$ 212.0</u>

*U.S. equities*—This class included actively and passively managed common equity securities comprised primarily of large-capitalization stocks with value, core and growth strategies.

*Non-U.S. equities*—This class included actively managed common equity securities comprised primarily of international large-capitalization stocks.

*Fixed income*—This class included debt instruments issued by the US Treasury, and corporate debt instruments.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The following table summarizes our defined benefit pension plan assets measured at fair value as of December 31, 2011:

Millions of Dollars	Pension Assets at Fair Value as of December 31, 2011			
Asset Class	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity Securities				
US equities	\$ 72.5	--	--	\$ 72.5
Non-US equities	33.6	--	--	33.6
Fixed Income Securities				
Government treasuries	--	--	--	--
C o r p o r a t e d e b t instruments	59.5	16.9	--	76.4
Real estate and other				
Real estate	--	--	0.2	0.2
Other	0.2	--	4.6	4.8
Total Assets	<u>\$ 165.8</u>	<u>\$ 16.9</u>	<u>\$ 4.8</u>	<u>\$ 187.5</u>

*Contributions*

The Company expects to contribute \$10 million to its pension plans and \$1 million to its other postretirement benefit plan in 2013.

*Estimated Future Benefit Payments*

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

Millions of Dollars	Pension Benefits	Other Benefits
2013	\$ 13.8	\$ 1.0
2014	\$ 14.8	\$ 0.9
2015	\$ 16.9	\$ 0.8
2016	\$ 17.2	\$ 0.8
2017	\$ 19.0	\$ 0.8
2018-2022	\$ 98.9	\$ 4.0

*Investment Strategies*

The investment strategy for pension plan assets is to maintain a broadly diversified portfolio designed to both preserve and grow plan assets to meet future plan obligations. The Company's average rate of return on assets from inception through December 31, 2012 was over 9.5%. The Company's assets are strategically allocated among equity, debt and other investments to achieve a diversification level that dampens fluctuations in investment returns. The Company's long-term investment strategy is an investment portfolio mix of approximately 65% in equity securities and 35% in fixed income securities. As of December 31, 2012, the Company had approximately 70% of its pension assets in equity securities and 30% in fixed income securities.

*Savings and Investment Plans*

The Company maintains a voluntary Savings and Investment Plan (a 401K plan) for most non-union employees in the U.S. Within prescribed limits, the Company bases its contribution to the Plan on employee contributions. The Company's contributions amounted to \$2.7 million for each of the years ended December 31, 2012, 2011 and 2010.

**Notes 15. Leases**

The Company has several non-cancelable operating leases, primarily for office space and equipment. Rent expense amounted to approximately \$5.0 million, \$5.3 million and \$6.0 million for the years ended December 31, 2012, 2011 and 2010, respectively. Total future minimum rental commitments under all non-cancelable leases for each of the years 2013 through 2017 and in aggregate thereafter are approximately \$3.8 million, \$2.7 million, \$2.4 million, \$1.7 million, \$1.4



**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

million, respectively, and \$6.8 million thereafter. Total future minimum rentals to be received under non-cancelable subleases were approximately \$1.5 million at December 31, 2012.

Total future minimum payments to be received under direct financing leases for each of the years 2013 through 2017 and the aggregate thereafter are approximately: \$2.2 million, \$1.1 million, \$0.8 million, \$0.4 million, \$0.1 million and \$-- million thereafter.

**Note 16. Litigation**

Certain of the Company's subsidiaries are among numerous defendants in a number of cases seeking damages for exposure to silica or to asbestos containing materials. The Company currently has 72 pending silica cases and 7 pending asbestos cases. To date, 1,394 silica cases and 32 asbestos cases have been dismissed. No new asbestos cases were filed in the fourth quarter of 2012, and twenty-two were dismissed. Most of these claims do not provide adequate information to assess their merits, the likelihood that the Company will be found liable, or the magnitude of such liability, if any. Additional claims of this nature may be made against the Company or its subsidiaries. At this time management anticipates that the amount of the Company's liability, if any, and the cost of defending such claims, will not have a material effect on its financial position or results of operations.

The Company has not settled any silica or asbestos lawsuits to date. We are unable to state an amount or range of amounts claimed in any of the lawsuits because state court pleading practices do not require identifying the amount of the claimed damage. The aggregate cost to the Company for the legal defense of these cases since inception was approximately \$0.2 million, the majority of which has been reimbursed by Pfizer Inc pursuant to the terms of certain agreements entered into in connection with the Company's initial public offering in 1992. Of the 7 pending asbestos cases, all allege liability based on products sold mostly or entirely prior to the initial public offering, and for which the Company is therefore entitled to indemnification pursuant to such agreements. Our experience has been that the Company is not liable to plaintiffs in any of these lawsuits and the Company does not expect to pay any settlements or jury verdicts in these lawsuits.

*Environmental Matters*

On April 9, 2003, the Connecticut Department of Environmental Protection issued an administrative consent order relating to our Canaan, Connecticut, plant where both our Refractories segment and Specialty Minerals segment have operations. We agreed to the order, which includes provisions requiring investigation and remediation of contamination associated with historic use of polychlorinated biphenyls ("PCBs") and mercury at a portion of the site. We have completed the required investigations and submitted several reports characterizing the contamination. We are now conducting a site-specific risk assessment required by the regulators.

We believe that the most likely form of overall site remediation will be to leave the existing contamination in place (with some limited soil removal), encapsulate it, and monitor the effectiveness of the encapsulation. We anticipate that a substantial portion of the remediation cost will be borne by the United States based on its involvement at the site from 1942 – 1964, as historic documentation indicates that PCBs and mercury were first used at the facility at a time of U.S. government ownership for production of materials needed by the military. Though the cost of the likely remediation remains uncertain pending completion of the phased remediation decision process, we have estimated that the Company's share of the cost of the encapsulation and limited soil removal described above would approximate \$0.4 million, which has been accrued as of December 31, 2012.

The Company is evaluating options for upgrading the wastewater treatment facilities at its Adams, Massachusetts plant. This work has been undertaken pursuant to an administrative Consent Order originally issued by the Massachusetts Department of Environmental Protection ("DEP") on June 18, 2002. This order was amended on June 1, 2009 and on June 2, 2010. The amended Order includes the investigation by January 1, 2022 of options for ensuring that the facility's wastewater treatment ponds will not result in unpermitted discharge to groundwater. Additional requirements of the amendment include the submittal by July 1, 2022 of a plan for closure of a historic lime solids disposal area. Preliminary engineering reviews completed in 2005 indicate that the estimated cost of wastewater treatment upgrades to operate this facility beyond 2024 may be between \$6 million and \$8 million. The Company estimates that the remaining remediation costs would approximate \$0.4 million, which has been accrued as of December 31, 2012.

The Company and its subsidiaries are not party to any other material pending legal proceedings, other than routine litigation incidental to their businesses.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 17. Stockholders' Equity**

*Capital Stock*

The Company's authorized capital stock consists of 100 million shares of common stock, par value \$0.10 per share, of which 34,949,620 shares and 35,271,981 shares were outstanding at December 31, 2012 and 2011, respectively, and 1,000,000 shares of preferred stock, none of which were issued and outstanding.

On November 14, 2012, the Company's Board of Directors approved a two-for-one stock split of the Company's outstanding common stock in the form of a 100-percent stock distribution payable on December 11, 2012 to shareholders of record on November 27, 2012. The stock split resulted in an increase of 17.6 million shares of common stock outstanding. Treasury shares were not affected by the stock split.

*Cash Dividends*

Cash dividends of \$4.4 million or \$0.125 per common share were paid during 2012. In January 2013, a cash dividend of approximately \$1.8 million or \$0.05 per share, was declared, payable in the first quarter of 2013.

*Stock Award and Incentive Plan*

The Company has adopted its 2001 Stock Award and Incentive Plan (the "Plan"), which provides for grants of incentive and non-qualified stock options, stock appreciation rights, stock awards or performance unit awards. The Plan is administered by the Compensation Committee of the Board of Directors. Stock options granted under the Plan have a term not in excess of ten years. The exercise price for stock options will not be less than the fair market value of the common stock on the date of the grant, and each award of stock options will vest ratably over a specified period, generally three years.

The following table summarizes stock option and restricted stock activity for the Plan:

	Stock Options			Restricted Stock	
	Shares Available for Grant	Shares	Weighted Average Exercise Price Per Share (\$)	Shares	Weighted Average Exercise Price Per Share (\$)
Balance January 1, 2010	2,068,250	1,575,060	\$ 26.27	377,436	\$ 25.08
Granted	(438,920)	282,280	24.56	156,640	24.57
Exercised/vested	--	(63,394)	22.44	(118,174)	27.22
Canceled	269,248	(153,886)	27.21	(115,362)	26.06
Balance December 31, 2010	1,898,578	1,640,060	27.05	300,540	23.60
Granted	(381,624)	244,646	32.06	136,978	32.08
Exercised/vested	--	(241,196)	25.01	(94,246)	31.99
Canceled	160,784	(69,536)	26.80	(91,248)	30.22
Balance December 31, 2011	1,677,738	1,573,974	27.10	252,024	27.21
Granted	(345,696)	222,250	32.04	123,446	32.04
Exercised/vested	--	(330,158)	25.15	(102,424)	25.90
Canceled	159,932	(70,546)	27.76	(89,386)	27.08
Balance December 31, 2012	<u>1,491,974</u>	<u>1,395,520</u>	<u>28.31</u>	<u>183,660</u>	<u>31.25</u>

**Note 18. Comprehensive Income**

Comprehensive income includes changes in the fair value of certain financial derivative instruments that qualify for hedge accounting to the extent they are effective, the recognition of deferred pension costs, and cumulative foreign currency translation adjustments.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The following table reflects the accumulated balances of other comprehensive income (loss):

(Millions of Dollars)	Currency Translation Adjustment	Unrecognized Pension Costs	Net Gain (Loss) On Cash Flow Hedges	Accumulated Other Comprehensive Income (Loss)
Balance at January 1, 2010	\$ 55.7	\$ (52.2)	\$ (0.3)	\$ 3.2
Current year net change	(9.2)	0.3	2.1	(6.8)
Balance at December 31, 2010	\$ 46.6	\$ (51.9)	\$ 1.7	\$ (3.6)
Current year net change	(16.7)	(25.6)	0.6	(41.7)
Balance at December 31, 2011	\$ 29.9	\$ (77.5)	\$ 2.3	\$ (45.3)
Current year net change	2.1	(7.8)	(0.2)	(5.9)
Balance at December 31, 2012	\$ <u>32.0</u>	\$ <u>(85.3)</u>	\$ <u>2.1</u>	\$ <u>(51.2)</u>

The income tax expense (benefit) associated with items included in other comprehensive income (loss) was approximately \$(1.3) million, \$(15.5) million and \$1.9 million for the years ended December 31, 2012 2011 and 2010, respectively.

**Note 19. Accounting for Asset Retirement Obligations**

The Company records asset retirement obligations in which the Company will be required to retire tangible long-lived assets. These are primarily related to its PCC satellite facilities and mining operations. The Company has also recorded the provisions related to conditional asset retirement obligations at its facilities. The Company has recorded asset retirement obligations at all of its facilities except where there are no contractual or legal obligations. The associated asset retirement costs are capitalized as part of the carrying amount of the long-lived asset.

The following is a reconciliation of asset retirement obligations as of December 31, 2012 and 2011:

(Millions of Dollars)	2012	2011
Asset retirement liability, beginning of period	\$ 14.7	\$ 14.7
Accretion expense	0.7	0.6
Additional obligations	0.1	0.2
Reversal of obligations	(0.2)	(0.4)
Payments	(0.3)	(0.2)
Foreign currency translation	--	(0.2)
Asset retirement liability, end of period	\$ <u>15.0</u>	\$ <u>14.7</u>

The current portion of the liability of approximately \$0.3 million is included in other current liabilities. The long-term portion of the liability of approximately \$14.7 million is included in other non-current liabilities.

Accretion expense is included in cost of goods sold in the Company's Consolidated Statements of Income.

**Note 20. Non-Operating Income and Deductions**

(Millions of dollars)	Year Ended December 31,		
	2012	2011	2010
Interest income	\$ 3.2	\$ 3.9	\$ 2.7
Interest expense	(3.2)	(3.3)	(3.3)
Foreign exchange gains (losses)	(1.4)	(1.2)	0.3
Foreign currency translation loss upon liquidation	--	--	--
Foreign currency translation loss upon deconsolidation of a foreign entity	--	(1.4)	--
Gain on sale of previously impaired assets	--	--	0.2
Settlement for customer contract terminations	--	--	0.8
Other deductions	(1.6)	(0.6)	(0.1)
Non-operating income (deductions), net	\$ <u>(3.0)</u>	\$ <u>(2.6)</u>	\$ <u>0.6</u>



**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

During the third quarter to 2011, the Company recognized currency translation losses of \$1.4 million upon the sale of a 50% interest in and deconsolidation of its previously controlled joint venture in Korea.

During the second quarter of 2010, the Company recognized income of \$0.8 million for a settlement related to a customer contract termination.

**Note 21. Segment and Related Information**

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. The Company's operating segments are strategic business units that offer different products and serve different markets. They are managed separately and require different technology and marketing strategies.

The Company has two reportable segments: Specialty Minerals and Refractories. The Specialty Minerals segment produces and sells precipitated calcium carbonate and lime, and mines, processes and sells the natural mineral products limestone and talc. This segment's products are used principally in the paper, building materials, paints and coatings, glass, ceramic, polymers, food, automotive, and pharmaceutical industries. The Refractories segment produces and markets monolithic and shaped refractory products and systems used primarily by the steel, cement and glass industries as well as metallurgical products used primarily in the steel industry.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. The Company evaluates performance based on the operating income of the respective business units. Depreciation expense related to corporate assets is allocated to the business segments and is included in their income from operations. However, such corporate depreciable assets are not included in the segment assets. Intersegment sales and transfers are not significant.

Segment information for the years ended December 31, 2012, 2011 and 2010 was as follows:

(Millions of Dollars)	<b>2012</b>		
	<b>Specialty Minerals</b>	<b>Refractories</b>	<b>Total</b>
Net sales	\$ 662.2	\$ 343.4	\$ 1,005.6
Income from operations	84.1	32.6	116.7
Depreciation, depletion and amortization	10.3	40.9	51.2
Segment assets	617.0	355.5	972.5
Capital expenditures	41.0	8.0	49.0

(Millions of Dollars)	<b>2011</b>		
	<b>Specialty Minerals</b>	<b>Refractories</b>	<b>Total</b>
Net sales	\$ 676.1	\$ 368.8	\$ 1,044.9
Income from operations	72.8	33.2	106.0
Restructuring and other charges	1.0	(0.6)	0.5
Depreciation, depletion and amortization	47.6	10.6	58.2
Segment assets	603.8	355.8	959.6
Capital expenditures	41.7	8.0	49.7

(Millions of Dollars)	<b>2010</b>		
	<b>Specialty Minerals</b>	<b>Refractories</b>	<b>Total</b>
Net sales	\$ 665.0	\$ 337.4	\$ 1,002.4
Income from operations	74.7	28.0	102.7
Restructuring and other charges	0.5	0.3	0.8
Depreciation, depletion and amortization	52.6	11.4	64.0
Segment assets	585.7	340.5	926.2
Capital expenditures	23.3	8.2	31.5

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

A reconciliation of the totals reported for the operating segments to the applicable line items in the consolidated financial statements is as follows:

**(Millions of Dollars)**

**Income from continuing operations before**

<b>provision for taxes:</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Income from operations for reportable segments	\$ 116.7	\$ 106.0	\$ 102.7
Unallocated corporate expenses	(6.7)	(5.7)	(4.5)
Interest income	3.2	3.9	2.7
Interest expense	(3.2)	(3.3)	(3.3)
Other income (deductions)	(3.0)	(3.2)	1.2
Income from continuing operations before provision for taxes	<u>\$ 107.0</u>	<u>97.7</u>	<u>98.8</u>

<b>Total assets</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Total segment assets	\$ 972.5	\$ 959.6	\$ 926.2
Corporate assets	238.7	205.4	189.9
Consolidated total assets	<u>\$ 1,211.2</u>	<u>\$ 1,165.0</u>	<u>\$ 1,116.1</u>

<b>Capital expenditures</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Total segment capital expenditures	\$ 49.0	\$ 49.7	\$ 31.5
Corporate capital expenditures	3.1	2.4	3.0
Consolidated total capital expenditures	<u>\$ 52.1</u>	<u>52.1</u>	<u>34.5</u>

The carrying amount of goodwill by reportable segment as of December 31, 2012 and December 31, 2011 was as follows:

<b>(Millions of Dollars)</b>	<b>Goodwill</b>	
	<b>December 31, 2012</b>	<b>December 31, 2011</b>
Specialty Minerals	\$ 14.1	\$ 13.8
Refractories	51.7	50.9
Total	<u>\$ 65.8</u>	<u>\$ 64.7</u>

The net change in goodwill since December 31, 2011 is attributable to the effect of foreign exchange.

Financial information relating to the Company's operations by geographic area was as follows:

**(Millions of Dollars)**

<b>Net Sales</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
United States	\$ 562.5	\$ 557.5	\$ 534.3
Canada/Latin America	72.5	74.3	68.9
Europe/Africa	257.0	298.4	288.4
Asia	113.6	114.7	110.8
Total International	443.1	487.4	468.1
Consolidated total net sales	<u>\$ 1,005.6</u>	<u>1,044.9</u>	<u>1,002.4</u>

**(Millions of Dollars)**

<b>Long-lived assets</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
United States	\$ 235.8	\$ 239.8	\$ 239.9
Canada/Latin America	14.5	14.6	14.9
Europe/Africa	69.0	72.0	89.9
Asia	67.3	59.8	59.4
Total International	150.8	146.4	164.2
Consolidated total long-lived assets	<u>\$ 386.6</u>	<u>386.2</u>	<u>404.1</u>

Net sales and long-lived assets are attributed to countries and geographic areas based on the location of the legal entity. No individual foreign country represents more than 10% of consolidated net sales or consolidated long-lived assets.

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The Company's sales by product category are as follows:

Millions of Dollars	2012	2011	2010
Paper PCC	\$ 480.3	\$ 497.0	\$ 496.6
Specialty PCC	65.9	63.6	58.0
Talc	48.1	46.9	44.0
GCC	67.9	68.6	66.4
Refractory Products	264.1	287.4	264.5
Metallurgical Products	79.3	81.4	72.9
Net sales	<u>\$ 1,005.6</u>	<u>\$ 1,044.9</u>	<u>\$ 1,002.4</u>

**Note 22. Quarterly Financial Data (unaudited)**

**Millions of Dollars, Except Per Share Amounts**

2012 Quarters	First	Second	Third	Fourth
Net Sales by Major Product Line				
PCC	\$ 138.1	\$ 136.3	\$ 137.0	\$ 134.9
Processed Minerals	29.6	31.8	28.6	25.9
Specialty Minerals Segment	167.7	168.1	165.6	160.8
Refractories Segment	89.4	85.9	84.7	83.4
Net sales	257.1	254.0	250.3	244.2
Gross profit	54.9	56.3	55.0	53.1
I n c o m e f r o m				
operations	27.0	29.5	27.8	25.7
C o n s o l i d a t e d n e t				
income	18.6	20.2	19.2	18.2
Non-controlling				
interests	(0.6)	(0.5)	(0.6)	(0.5)
Net income attributable to MTI	<u>\$ 18.0</u>	<u>\$ 19.7</u>	<u>\$ 18.6</u>	<u>\$ 17.7</u>

**Earnings per share:**

Basic	\$ 0.51	\$ 0.56	\$ 0.53	\$ 0.50
Diluted	\$ 0.51	\$ 0.56	\$ 0.53	\$ 0.50

**Market price range per share of common stock:**

High	\$ 33.96	\$ 33.60	\$ 36.99	\$ 39.92
Low	\$ 28.78	\$ 30.81	\$ 30.50	\$ 34.25
Close	\$ 32.70	\$ 31.89	\$ 35.46	\$ 39.92

**D i v i d e n d s p a i d p e r c o m m o n**  
share

	\$ 0.025	\$ 0.025	\$ 0.025	\$ 0.05
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**2011 Quarters**

2011 Quarters	First	Second	Third	Fourth
Net Sales by Major Product Line				
PCC	\$ 144.8	\$ 140.2	\$ 142.5	\$ 133.1
Processed Minerals	28.5	31.6	28.6	26.8
Specialty Minerals Segment	173.3	171.8	171.1	159.9
Refractories Segment	89.2	96.6	91.1	91.8
Net sales	262.5	268.4	262.2	251.7
Gross profit	52.9	53.7	52.9	52.7
I n c o m e f r o m				
operations	24.7	25.1	25.4	25.2
C o n s o l i d a t e d n e t				

income	16.7	17.2	16.3	20.1
Non-controlling Interests	) (0.9)	) (0.7)	) (0.7)	) (0.4)
Net income attributable to MTI	\$ 15.8	\$ 16.4	\$ 15.7	\$ 19.6
Earnings per share:				
Basic	\$ 0.43	\$ 0.45	\$ 0.44	0.55
Diluted	\$ 0.43	\$ 0.45	\$ 0.43	0.55

**MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Market price range per share of common stock:								
High	\$	34.37	\$	35.05	\$	34.32	\$	29.00
Low	\$	31.23	\$	31.51	\$	24.64	\$	23.38
Close	\$	34.37	\$	33.83	\$	24.64	\$	28.27
Dividends paid per common share								
	\$	0.025	\$	0.025	\$	0.025	\$	0.025

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders  
Minerals Technologies Inc.:

We have audited the accompanying consolidated balance sheets of Minerals Technologies Inc. and subsidiary companies as of December 31, 2012 and 2011, and the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2012. In connection with our audits of the consolidated financial statements, we also have audited the related financial statement schedule. These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Minerals Technologies Inc. and subsidiary companies as of December 31, 2012 and 2011, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2012, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the related financial statement schedule, when considered in relation to the consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Minerals Technologies Inc. and subsidiary companies' internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 22, 2013 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

New York, New York  
February 22, 2013

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders  
Minerals Technologies Inc.:

We have audited Minerals Technologies Inc. and subsidiary companies' internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) . Minerals Technologies Inc. and subsidiary companies' management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Minerals Technologies Inc. and subsidiary companies maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Minerals Technologies Inc. and subsidiary companies as of December 31, 2012 and 2011, and the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows and related financial statement schedule for each of the years in the three-year period ended December 31, 2012, and our report dated February 22, 2013 expressed an unqualified opinion on those consolidated financial statements and financial statement schedule.

/s/ KPMG LLP

New York, New York  
February 22, 2013



## Management's Report On Internal Control Over Financial Reporting

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Management of Minerals Technologies Inc. is responsible for the preparation, integrity and fair presentation of its published consolidated financial statements. The financial statements have been prepared in accordance with U.S. generally accepted accounting principles and, as such, include amounts based on judgments and estimates made by management. The Company also prepared the other information included in the annual report and is responsible for its accuracy and consistency with the consolidated financial statements.

Management is also responsible for establishing and maintaining effective internal control over financial reporting. The Company's internal control over financial reporting includes those policies and procedures that pertain to the Company's ability to record, process, summarize and report reliable financial data. The Company maintains a system of internal control over financial reporting, which is designed to provide reasonable assurance to the Company's management and board of directors regarding the preparation of reliable published financial statements and safeguarding of the Company's assets. The system includes a documented organizational structure and division of responsibility, established policies and procedures, including a code of conduct to foster a strong ethical climate, which are communicated throughout the Company, and the careful selection, training and development of our people.

The Board of Directors, acting through its Audit Committee, is responsible for the oversight of the Company's accounting policies, financial reporting and internal control. The Audit Committee of the Board of Directors is comprised entirely of outside directors who are independent of management. The Audit Committee is responsible for the appointment and compensation of the independent registered public accounting firm. It meets periodically with management, the independent registered public accounting firm and the internal auditors to ensure that they are carrying out their responsibilities. The Audit Committee is also responsible for performing an oversight role by reviewing and monitoring the financial, accounting and auditing procedures of the Company in addition to reviewing the Company's financial reports. The independent registered public accounting firm and the internal auditors have full and unlimited access to the Audit Committee, with or without management, to discuss the adequacy of internal control over financial reporting, and any other matters which they believe should be brought to the attention of the Audit Committee.

Management recognizes that there are inherent limitations in the effectiveness of any system of internal control over financial reporting, including the possibility of human error and the circumvention or overriding of internal control. Accordingly, even effective internal control over financial reporting can provide only reasonable assurance with respect to financial statement preparation and may not prevent or detect misstatements. Further, because of changes in conditions, the effectiveness of internal control over financial reporting may vary over time.

The Company assessed its internal control system as of December 31, 2012 in relation to criteria for effective internal control over financial reporting described in "Internal Control - Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on its assessment, the Company has determined that, as of December 31, 2012, its system of internal control over financial reporting was effective.

The consolidated financial statements have been audited by the independent registered public accounting firm, which was given unrestricted access to all financial records and related data, including minutes of all meetings of stockholders, the Board of Directors and committees of the Board. Reports of the independent registered public accounting firm, which includes the independent registered public accounting firm's attestation of the effectiveness of the Company's internal control over financial reporting are also presented within this document.

**/s/ Joseph C. Muscari**  
Chairman of the Board  
and Chief Executive Officer

**/s/ Douglas T. Dietrich**  
Senior Vice President, Finance and Treasury,  
Chief Financial Officer

**/s/ Michael A. Cipolla**  
Vice President, Corporate Controller  
and Chief Accounting Officer

February 22, 2013

**MINERALS TECHNOLOGIES INC. & SUBSIDIARY COMPANIES**  
**SCHEDULE II-VALUATION AND QUALIFYING ACCOUNTS**  
(thousands of dollars)

Description	<u>Balance at Beginning of Period</u>	<u>Additions Charged to Costs, Provisions and Expenses (b)</u>	<u>Deductions (a)</u>	<u>Balance at End of Period</u>
<b>Year ended December 31, 2012</b>				
Valuation and qualifying accounts deducted from assets to which they apply:				
Allowance for doubtful accounts	\$ <u>3,009</u>	\$ <u>1,011</u>	<u>(183)</u>	<u>3,837</u>
<b>Year ended December 31, 2011</b>				
Valuation and qualifying accounts deducted from assets to which they apply:				
Allowance for doubtful accounts	\$ <u>2,440</u>	\$ <u>877</u>	\$ <u>(308)</u>	\$ <u>3,009</u>
<b>Year ended December 31, 2010</b>				
Valuation and qualifying accounts deducted from assets to which they apply:				
Allowance for doubtful accounts	\$ <u>2,890</u>	\$ <u>49</u>	\$ <u>(499)</u>	\$ <u>2,440</u>

(a) Includes impact of translation of foreign currencies.

## Exhibit Index

The following documents are filed as part of this report:

10.12	<a href="#"><u>Company Retirement Plan, as amended and restated, dated December 21, 2012</u></a>
10.14	<a href="#"><u>Company Savings and Investment Plan, as amended and restated, dated December 21, 2012</u></a>
21.1	<a href="#"><u>Subsidiaries of the Company</u></a>
23.1	<a href="#"><u>Consent of Independent Registered Public Accounting Firm</u></a>
24	<a href="#"><u>Power of Attorney</u></a>
31.1	<a href="#"><u>Rule 13a-14(a)/15d-14(a) Certification executed by the Company's principal executive officer</u></a>
31.2	<a href="#"><u>Rule 13a-14(a)/15d-14(a) Certification executed by the Company's principal financial officer</u></a>
32	<a href="#"><u>Section 1350 Certification</u></a>
95	<a href="#"><u>Information Concerning Mine Safety Violations</u></a>
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase

## Exhibit 10.12

### MINERALS TECHNOLOGIES INC. RETIREMENT PLAN

**WHEREAS**, Minerals Technologies Inc. (hereinafter referred to as the "Employer") heretofore adopted the Minerals Technologies Inc. Retirement Annuity Plan (the "Retirement Annuity Plan"), for the benefit of its eligible Employees, effective as of October 22, 1992; and

**WHEREAS**, the Employer reserved the right to amend the Retirement Annuity Plan; and

**WHEREAS**, effective as of January 1, 2002, the Employer amended the Retirement Annuity Plan to provide that employees employed on or after January 1, 2002 would accrue benefits under a cash balance formula and that Participants who were accruing benefits under the Retirement Annuity Plan on December 31, 2001 generally would continue to accrue benefits under the career earnings benefit formula in effect on December 31, 2001, and in connection therewith, changed the name of the Retirement Annuity Plan to the "Minerals Technologies Inc. Retirement Plan" (the "Plan"); and

**WHEREAS**, the Employer heretofore amended the Plan from time to time, including closing the Plan to new participants effective January 1, 2010, and now desires to restate the Plan by incorporating all prior amendments, and to further amend the Plan to the extent required by applicable law; and

**WHEREAS**, it is intended that the Plan is to continue to be a qualified plan under Section 401(a) of the Code for the exclusive benefit of the Participants and their Beneficiaries;

**NOW, THEREFORE**, the Plan is hereby amended by restating the Plan, effective as of January 1, 2012, except where the provisions of the Plan (or the requirements of applicable law) shall otherwise specifically provide, in its entirety as follows:

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## **ARTICLE ONE--DEFINITIONS**

For purposes of this Plan, unless the context or an alternative definition specified within another Article provides otherwise, the following words and phrases shall have the meanings indicated:

**1.1 "ACCRUED BENEFIT"** shall mean a monthly retirement benefit, commencing on a Participant's Normal Retirement Date, based on the value of the Participant's Cash Balance Account or, if applicable, the Participant's benefit under the Career Earnings Formula as of such date.

**1.2 "ACTUARIAL EQUIVALENT"** shall mean:

**(1) Benefit Payable Under Cash Balance Formula.**

(A) In the case of a benefit payable pursuant to Section 4.1(b), the amount payable in the form of a lump-sum payment shall be equal to the value of the Participant's Cash Balance Account as of the last day of the month prior to the month in which distribution occurs.

(B) In determining the amount of a benefit payable in the form of a single life annuity under Section 5.1, actuarial equivalence as of any given date shall be determined by applying to the Participant's Cash Balance Account, valued as of the annuity starting date, a factor determined on the basis of-

(i) an interest rate equal to the applicable interest rate (within the meaning of Code Section 417(e)(3)), determined for the full calendar month that is four (4) months prior to the month in which the annuity starting date occurs; and

(ii) for all such benefits payable on an annuity starting date that is on or prior to December 31, 2002, the 1983 Group Annuity Mortality Table weighted 50 percent male; and for all such benefit payments payable on an annuity starting date that is on or after January 1, 2003, and prior to January 1, 2008, the 1994 Group Annuity Reserve Table weighted 50 percent male, projected to 2002; or such other mortality assumption as shall be prescribed by the Secretary of the Treasury, which assumption shall be based on the prevailing commissioners' standard table described in Code Section 807(d)(5)(A) used to determine reserves for group annuity contracts issued on the date the determination is being made (without regard to any other subparagraph of Code Section 807(d)(5)); and for all such benefits payable on an annuity starting date that is on or after January, 2008, the "applicable mortality table" specified in Code Section 417(e)(3).

(C) In determining the amount of a benefit payable in the form of a "qualified joint and surviving annuity" under Section 5.2 or under an optional form available to a Participant under Section 5.3, actuarial equivalence as of any given date shall be determined by applying to the Participant's single life annuity as determined in Section 1.2(b)(1)(B), valued as of the annuity starting date, a factor determined on the basis of:

(i) An interest rate assumption of 7½% per annum; and

(ii) for all such benefits payable on an annuity starting date that is on or prior to December 31, 2002, the 1983 Group Annuity Mortality Table weighted 50 percent male; and for all such benefit payments payable on an annuity starting date that is on or after January 1, 2003 and prior to January 1, 2008, the 1994 Group Annuity Reserve Table weighted 50 percent male, projected to 2002; or such other mortality assumption as shall be prescribed by the Secretary of the Treasury, which assumption shall be based on the prevailing commissioners' standard table described in Code Section 807(d)(5)(A) used to determine reserves for group annuity contracts issued on the date the determination is being made (without regard to any other subparagraph of Code Section 807(d)(5)); and for all such benefits payable on an annuity starting date that is on or after January 1, 2008, the "applicable mortality table" specified in Code Section 417(e)(3).

## **(2) Benefit Payable Under Career Earnings Formula.**

In determining the amount of a benefit payable in the form of a qualified joint and surviving annuity under Section 5.2, or a joint and contingent annuitant option and/or level income option under Section 5.3, and for purposes of determining any adjustment to be made to a Participant's Accrued Benefit under Section 5.5, actuarial equivalence as of any given date shall be determined using an interest rate assumption of 7½% per annum and the mortality table described in Section 1.2(b)(2)(B). In determining the amount of benefit payable in the form of a lump-sum payment under Section 5.3(d), and for purposes of determining whether the cash-out provisions of Section 5.1 shall be applicable, actuarial equivalence as of any given date shall be determined using:

(A) for Plan Years beginning before January 1, 2008, an interest rate equal to the annual rate of interest on 30-year Treasury securities or the generally accepted proxy therefore, in each case as specified by the Commissioner of the Internal Revenue Service for the full calendar month four (4) months prior to the month in which the Participant retires; and for Plan Years beginning on or after January 1, 2008, an interest rate equal to the "applicable interest rate" specified in Code Section 417(e)(3) for the full calendar month four (4) months prior to the month in which the Participant retires; and

(B) for all such benefits payable on an annuity starting date that is on or prior to December 31, 2002, the 1983 Group Annuity Mortality Table weighted 50 percent male; and for all such benefit payments payable on an annuity starting date that is on or after January 1, 2003 and prior to January 1, 2008, the 1994 Group Annuity Reserve Table weighted 50 percent male, projected to 2002; or such other mortality assumption as shall be prescribed by the Secretary of the Treasury, which assumption shall be based on the prevailing commissioners' standard table described in Code Section 807(d)(5)(A) used to determine reserves for group annuity contracts issued on the date the determination is being made (without regard to any other subparagraph of Code Section 807(d)(5)); and for all such benefits payable on an annuity starting date that is on or after January 1, 2008, the "applicable mortality table" specified in Code Section 417(e)(3).

In the event the definition used to determine Actuarial Equivalent is modified, a Participant's benefit, on or after the effective date of such change, shall be the greater of (1) the Actuarial Equivalent of the Accrued Benefit determined as of the day before the effective date of the change in such definition, or (2) the Actuarial Equivalent of the total Accrued Benefit as of the date of determination computed using the new definition. The benefit determined under this subsection shall in no event be less than the Participant's Accrued Benefit as of July 1, 1995, determined by applying a 5 percent assumed rate of interest in lieu of the applicable interest rate under Code Section 417(e)(3), wherever the same appears in this definition.

**1.3 "ACTUARY"** shall mean an actuary enrolled under Federal practice, or a firm of actuaries which has on its staff such an actuary, appointed by the Administrator under whose supervision valuation reports and benefit calculations are performed for the Plan.

**1.4 "ADMINISTRATOR" OR "PLAN ADMINISTRATOR"** shall mean the Plan Administrator appointed in accordance with the provisions of Section 8.1.

**1.5 "ANNUAL PAY CREDITS"** shall mean the amounts credited to a Participant's Cash Balance Account in accordance with Section 4.1(c).

**1.6 "ANNIVERSARY YEAR"** shall mean (1) the twelve-month period following the date on which an Employee first begins his employment with the Employer, as well as successive twelve-month periods thereafter, and (2) the twelve month period following the date on which an Employee returns to the employ of the Employer after incurring a Break in Service as well as successive twelve-month periods thereafter. No Anniversary Year shall be credited for purposes of vesting unless in such Anniversary Year the Employee has completed 1,000 or more Hours of Service for the Employer.



**1.7 "BENEFICIARY"** shall mean any person, trust, organization or estate entitled to receive a death benefit under the Plan on the death of a Participant (pursuant to Article Five with respect to the Participant's death after commencement of benefits to the Participant, and pursuant to Article Six with respect to the Participant's death before commencement of benefits to the Participant).

**1.8 "BREAK IN SERVICE"** shall have the meaning as set forth in Section 2.2.

**1.9 "CAREER EARNINGS"** shall mean the Participant's aggregate Earnings during his period of Credited Service, except that:

(1) if the Participant was employed on October 1, 2006, the Participant's Earnings for each calendar year prior to 2003 shall be the average of such Participant's Earnings during the five consecutive calendar years prior to 2003 during which the Participant rendered Credited Service which yield the highest average, provided such Participant's Earnings are not reduced thereby; and

(2) if the Participant was employed on April, 1998, but terminated employment prior to October 1, 2006, the Participant's Earnings for each calendar year prior to 1998 shall be the average of such Participant's Earnings during the five (5) consecutive calendar years prior to 1998 during which the Participant rendered Credited Service which yield the highest average, provided such Participant's Earnings are not reduced thereby; and

(3) if the Participant was employed on July 1, 1995, but terminated employment prior to April 1, 1998, the Participant's Earnings for each calendar year prior to 1995 shall be the average of such Participant's Earnings during the five (5) consecutive calendar years prior to 1995 during which the Participant rendered Credited Service which yield the highest average; provided such Participant's Earnings are not reduced thereby; and

(4) if the Participant was employed on October 22, 1992, but terminated employment before July 1, 1995, the Participant's Earnings for each calendar year prior to 1992 shall be the average of such Participant's Earnings during the five (5) consecutive calendar years prior to 1992 during which the Participant rendered Credited Service which yield the highest average, provided such Participant's Earnings are not reduced thereby; and

(5) in each case, only the Participant's Earnings during his last thirty-five (35) years of Credited Service shall be counted; provided, however, that, such a calculation shall not lessen such Participant's Career Earnings below the result of a prior calculation.

**1.10 "CAREER EARNINGS FORMULA"** shall mean the benefit formula described in Section 4.1(a).

**1.11 "CASH BALANCE ACCOUNT"** shall mean the notional account deemed to have been established for each Participant for the purpose of determining each Participant's benefit under the Cash Balance Formula.

**1.12 "CASH BALANCE FORMULA"** shall mean the benefit formula described in Section 4.1(b).

**1.13 "CODE"** shall mean the Internal Revenue Code of 1986, as amended from time to time.

**1.14 "COMPANY"** shall mean Minerals Technologies Inc.

**1.15 "CREDITED SERVICE"** shall mean Service on which a Participant's benefits are based, in accordance with the provisions of Section 2.1.

**1.16 "DEFERRED RETIREMENT DATE"** shall mean the date of retirement of a Participant after his Normal Retirement Date.

**1.17 "DISABILITY" or "DISABLED"** shall mean the inability of a Participant, who is a participant in a long-term disability plan of the Employer, to perform his duties for the Employer as a result of any bodily injury or disease or mental infirmity and for which the Participant is receiving disability benefits under such long-term disability plan. A Participant who suffers a Disability shall be considered Disabled only during the period in which he is receiving disability benefits under such long-term disability plan.

**1.18 "DISABILITY LEAVE STATUS"** shall mean the leave status described in Section 4.3(a).

**1.19 "EARNINGS"**

(1) Items Included. Earnings shall mean actual salary, wages, bonus (except as otherwise provided below), and other remuneration earned by an Employee from an Employer for his service with an Employer, as determined by such Employer. Earnings shall include pre-tax contributions under (A) the Company's Savings and Investment Plan, (B) a cafeteria plan under Code section 125 and (C) a transportation fringe benefit plan under Code section 132(f)(4). Earnings shall also include earnings from Pfizer, Inc. to the extent that Pfizer, Inc. has transferred the accumulated benefit obligation of such person under the Pfizer Inc. Retirement Annuity Plan to the Company under the terms and conditions of the Reorganization Agreement between Pfizer Inc. and the Company dated as of September 28, 1992.

(2) Items Excluded. Earnings shall not include any part of the cost of any employee benefit (other than pre-tax contributions under (A) the Company's Savings and Investment Plan, (B) a cafeteria plan under Code section 125 or (C) under a transportation fringe benefit plan under Code section 132(f)(4)), including, without limitation, stock options, perquisites and group insurance, matching contributions under the Company's Savings and Investment Plan, or of any expense reimbursement, including, without limitation, relocation costs, or of any remuneration received in the form of salary continuance or lump-sum severance by an Employee while no longer providing services to the Company. No part of any bonus or other remuneration forming part of the compensation of any Employee shall be used to determine benefits under the Plan, if such bonus should cause such benefit to become discriminatory under the applicable provisions of the Code.

In addition to other applicable limitations set forth in the Plan, and notwithstanding any other provision of the Plan to the contrary, the annual Earnings of each Participant taken into account under the Plan shall not exceed the applicable limit under Section 401(a)(17) of the Code for the relevant calendar year (\$250,000 for the 2012 calendar year), as adjusted by the Secretary of the Treasury or his delegate for increases in the cost of living in accordance with Section 401(a)(17)(B) of the Code. The cost-of-living adjustment in effect for a calendar year applies to any period, not exceeding twelve (12) months, over which Earnings are determined (determination period) beginning in such calendar year. If a determination period consists of fewer than twelve (12) months, the annual Earnings limit shall be multiplied by a fraction, the numerator of which is the number of months in the determination period, and the denominator of which is twelve (12).

For purposes of determining who is a Highly-Compensated Employee, Earnings shall mean compensation as defined in Section 414(q)(4) of the Code.

Any Earnings paid after the Participant's severance from employment with the Employer (except for compensation attributable to the pay period in which the severance from employment occurred) shall not be taken into account for purposes of determining a Participant's Accrued Benefit.

**1.20 "EFFECTIVE DATE."** The Effective Date of this restated Plan, on and after which it supersedes the terms of the existing Plan document, is January 1, 2012, except where the provisions of the Plan (or the requirements of applicable law) shall otherwise specifically provide. The rights of any Participant who terminated employment with the Employer prior to the applicable date shall be established under the terms of the Plan and Trust as in effect at the time of the Participant's termination from employment, unless the Participant subsequently returns to employment with the Employer, or unless otherwise provided under the terms of the Plan. Rights of spouses and Beneficiaries of such Participants shall also be governed by those documents.

**1.21 "EMPLOYEE"** shall mean a common law employee of the Employer.

**1.22 "EMPLOYER"** shall mean the Company and any subsidiary or affiliate of which, with the approval of the board of directors of the Company, has adopted the Plan and shall include any successor(s) thereto which adopt this Plan. If, under state law, the Employer at any time is not governed by directors but instead by its stockholders, reference herein to the board of directors shall be deemed to refer to the individual(s) empowered to vote on the Employer's affairs.

**1.23 "EMPLOYMENT DATE"** shall mean the first date as of which an Employee is credited with an "Hour of Service," provided that in the case of a Break in Service, his Employment Date shall be the first date thereafter as of which he is credited with an Hour of Service.

**1.24 "HIGHLY-COMPENSATED EMPLOYEE"** shall mean any Employee of the Employer who:

(a) was a five percent (5%) owner of the Employer (as defined in Code Section 416(i)(1)) at any time during the "determination year" or "look-back year"; or

(b) earned more than \$115,000 of Earnings from the Employer during the "look-back year". The \$115,000 amount shall be adjusted at the same time and in the same manner as under Section 415(d) of the Code.

An Employee who separated from Service prior to the "determination year" shall be treated as a Highly-Compensated Employee for the "determination year" if such Employee was a Highly-Compensated Employee when such Employee separated from Service, or was a Highly-Compensated Employee at any time after attaining age fifty-five (55).

For purposes of this Section, the "determination year" shall be the Plan Year for which a determination is being made as to whether an Employee is a Highly-Compensated Employee. The "look-back year" shall be the twelve (12)-month period immediately preceding the "determination year".

**1.25 "HOUR OF SERVICE"** shall have the meaning set forth below:

(a) An Hour of Service is each hour for which an Employee is paid, or entitled to payment, for the performance of duties for the Employer, during the applicable computation period.

(b) An Hour of Service is each hour for which an Employee is paid, or entitled to payment, by the Employer on account of a period of time during which no duties are performed (irrespective of whether the employment relationship has terminated) due to vacation, holiday, illness, incapacity (including disability), layoff, jury duty, military duty, or leave of absence. Notwithstanding the preceding sentence,

(i) No more than five hundred and one (501) Hours of Service shall be credited under this paragraph (b) to any Employee on account of any single continuous period during which the Employee performs no duties (whether or not such period occurs in a single computation period). Hours under this paragraph shall be calculated and credited pursuant to Section 2530.200b-2 of the Department of Labor Regulations which is incorporated herein by reference;

(ii) An hour for which an Employee is directly or indirectly paid, or entitled to payment, on account of a period during which no duties are performed shall not be credited to the Employee if such payment is made or due under a plan maintained solely for the purpose of complying with applicable workmen's compensation, or unemployment compensation or disability insurance laws; and

(iii) Hours of Service shall not be credited for a payment which solely reimburses an Employee for medical or medically related expenses incurred by the Employee.

For purposes of this paragraph (b), a payment shall be deemed to be made by or due from the Employer regardless of whether such payment is made by or due from the Employer directly, or indirectly through, among others, a trust fund, or insurer, to which the Employer contributes or pays premiums and regardless of whether contributions made or due to the trust fund, insurer or other entity are for the benefit of particular Employees or are on behalf

of a group of Employees in the aggregate.

(c) An Hour of Service is each hour for which back pay, irrespective of mitigation of damages, is either awarded or agreed to by the Employer. The same Hours of Service shall not be credited both under paragraph (a) or paragraph (b), as the case may be, and under this paragraph (c). Thus, for example, an Employee who receives a back pay award following a determination that he was paid at an unlawful rate for Hours of Service previously credited shall not be entitled to additional credit for the same Hours of Service. Crediting of Hours of Service for back pay awarded or agreed to with respect to periods described in paragraph (b) shall be subject to the limitations set forth in that paragraph.

(d) Hours of Service under this Section shall be determined under the terms of the Family and Medical Leave Act of 1993 and the Uniformed Services Employment and Reemployment Rights Act of 1994.

With respect to periods of employment prior to July 1, 2005, each Employee shall be credited with Hours of Service on the basis of an assumed one hundred and ninety (190) Hours of Service per month for each month for which the Employee would have received at least one (1) Hour of Services in accordance with this definition, to the extent that it does not result in crediting Hours of Service more than once with respect to any period.

With respect to periods of employment after June 30, 2005, Hours of Service shall be determined from records of actual hours worked and hours for which the Employer makes payment or for which payment is due from the Employer, subject to the limitations enumerated above, to the extent that it does not result in crediting Hours of Service more than once with respect to any period.

**1.26 "INTEREST CREDITS"** shall mean the amounts credited to a Participant's Cash Balance Account in accordance with Section 4.1(d).

**1.27 "LEASED EMPLOYEE"** shall mean any person who, pursuant to an agreement between the Employer and any other person or organization, has performed services for the Employer (determined in accordance with Section 414(n)(6) of the Code) on a substantially full-time basis for a period of at least one year, where such services are performed under the primary direction or control of the Employer. A person shall not be considered a Leased Employee if the total number of Leased Employees does not exceed twenty percent (20%) of the Nonhighly-Compensated Employees employed by the Employer, and if any such person is covered by a money purchase pension plan providing (a) a nonintegrated employer contribution rate of at least ten percent (10%) of compensation as defined in Section 9.2(b)(2) of the Plan; (b) immediate participation; and (c) full and immediate vesting.

**1.28 "NONHIGHLY-COMPENSATED EMPLOYEE"** shall mean any Employee of the Employer who is not a Highly-Compensated Employee.

**1.29 "NORMAL RETIREMENT AGE"** shall mean a Participant's sixty-fifth (65th) birthday if the Participant commenced employment on or before July 31, 2002, or the later of the date the Employee attains age sixty-five (65) or the date the Employee completes five (5) years of Credited Service, if the Participant commenced employment on or after August 1, 2002.

**1.30 "NORMAL RETIREMENT DATE"** shall mean the first day of the month coincident with or next following the date the Participant attains his Normal Retirement Age.

**1.31 "PARTICIPANT"** shall mean any Employee or former Employee who is eligible to participate in the Plan or whose Beneficiary may be eligible to receive any such benefit.

**1.32 "PLAN"** shall mean the Minerals Technologies Inc. Retirement Plan as set forth herein and as it may be amended from time to time.

**1.33 "PLAN YEAR"** shall mean the twelve (12)-consecutive month period beginning January 1 and ending December 31.

**1.34 "PRIMARY SOCIAL SECURITY BENEFIT"** shall mean the estimated monthly primary insurance amount payable to a Participant under the federal Social Security Act as in effect on the date immediately preceding the earliest of the following events to occur: (i) attainment of his Normal Retirement Date; (ii) attainment of age sixty-five (65); (iii) termination of employment as an Employee; or (iv) any termination of the Plan. Moreover, if such earliest event occurs prior the Participant's attainment of age sixty-five (65), his estimated monthly primary insurance amounts shall be computed as of his attainment of age sixty-five (65) based on the provisions of the federal Social Security Act in effect when such earliest event occurs and (i) if the Participant's benefit commencement date is on or after his Normal Retirement Date, on the assumption that after such earliest event he shall receive compensation equal to his Earnings at the time of such earliest event until he reaches age 65 or (ii) if the Participant's benefit commencement date is before his Normal Retirement Date, on the assumption that the Participant does not receive any compensation after such earliest event which is treated as wages for the purposes of the federal Social Security Act.

Notwithstanding the foregoing and in accordance with procedures established by the Administrator, in the event a Participant attains his Normal Retirement Date or terminates employment as an Employee and provides the Company with a statement from the Social Security Administration indicating his actual compensation for Social Security purposes for some or all years prior to the date he attains his Normal Retirement Date or terminates, such compensation shall be taken into account as his compensation for such years in determining his Primary Social Security Benefit for the purposes of the Plan, provided that such actual compensation produces a larger benefit under the Plan. For years prior to the date the Participant attains his Normal Retirement Date or terminates with respect to which such a statement is not provided, the Company may estimate such compensation by applying a salary scale, projected backwards, which is the actual change in the average compensation from year to year as determined by the Social Security Administration.

Any information provided by a Participant to the Company pursuant to the foregoing provisions must be provided prior to benefit commencement and no later than two years after the Participant's termination of employment or notice of his benefits under the Plan. Notice that a Participant may provide actual compensation history obtained from the Social Security Administration shall be provided in accordance with applicable regulatory guidance.

**1.35 "SPOUSE"** shall mean, whether or not capitalized, the person of the opposite sex to whom a Participant is legally married, unless a provision of the Plan specifically provides otherwise. References to "married" shall refer to a Participant with a spouse within the meaning of this definition, unless a provision of the Plan specifically provides otherwise.

**1.36 "TRUST"** shall mean the Trust Agreement entered into between the Employer and the Trustee forming part of this Plan, together with any amendments thereto.

**1.37 "TRUST FUND"** shall mean any and all property held by the Trustee pursuant to the Trust Agreement, together with income therefrom.

**1.38 "TRUSTEE"** shall mean the Trustee or Trustees appointed by the Employer, and any successors thereto.

**1.38 "VALUATION DATE"** shall mean the annual date selected by the Actuary, in accordance with the requirements of applicable law, as of which Plan assets are valued and liabilities determined for purposes of an actuarial valuation.

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## **ARTICLE TWO--SPECIAL SERVICE RULES**

Service is the period of employment credited under the Plan. Definitions and special rules related to Service are as follows:

**2.1 CREDITED SERVICE.** A Participant shall be credited with a year of "Credited Service" for each Anniversary Year during which he completes at least one thousand (1,000) Hours of Service. No fractional years of Credited Service shall be credited to a Participant, except for purposes of determining (i) the Primary Social Security Benefit offset amount pursuant to Section 4.1(a)(2), and (ii) a Participant's Career Earnings and his eligibility for early retirement under Sections 4.4(b)(2)(A) and (B), in which event the Participant's Credited Service shall be determined on the basis of the months of employment with the Employer during the fractional Anniversary Year without regard to whether the Participant completes one thousand (1,000) or more Hours of Service within such periods. For purposes of the preceding sentence, a month of employment shall be credited with respect to the Participant's first and last month of employment with the Employer if the Participant is employed for at least fifteen (15) days in each such month.

With respect to any Participant who was an active participant in the Pfizer Inc. Retirement Annuity Plan (the "Pfizer Plan") immediately prior to October 22, 1992, and who commenced employment with the Employer on or after October 22, 1992 and prior to June 1, 1993, Credited Service shall include any service credited to such Participant under the Pfizer Plan provided such Participant was an active participant under the Pfizer Plan immediately prior to such Participant's employment by the Employer.

In addition, Credited Service shall include service with an employer other than an Employer or "related group member" (within the meaning of Section 2.5(b)) which service is recognized as Credited Service pursuant to Schedule D. Except as otherwise provided, Prior Service of a Participant shall also be included in the Participant's Credited Service. For such purposes, "Prior Service" shall mean service rendered by a person who is in the service of the Employer before the date on which he becomes a Participant and who continues in service on and after the date he becomes a Participant.

**2.2 B R E A K I N S E R V I C E .** A B r e a k i n S e r v i c e (a Break in Service for measuring years of Credited Service), in which an Employee or Participant is not credited with at least five hundred and one (501) Hours of Service.

**2.3 CESSATION OF EMPLOYMENT AND RETURN TO SERVICE.** An Employee who returns to employment after a Break in Service shall retain credit for his pre-Break years of Credited Service, provided, however, that if, when the Employee incurred his Break in Service, he had not completed sufficient years of Credited Service to be credited with a vested benefit under the Plan, his pre-Break years of Credited Service shall be disregarded if the number of consecutive Breaks in Service equals or exceeds the greater of five (5) or the number of pre-Break years of Credited Service, provided, however, that the Credited Service that such Employee had prior to the Break in Service shall not be disregarded pursuant to this section if the Employee completes at least twenty-four (24) consecutive months of Credited Service following his reemployment.

If a reemployed Employee does not forfeit his Credited Service as provided above, solely for purposes of determining his Career Earnings, the last calendar year in which he rendered Credited Service shall be treated as being consecutive with the first calendar year in which he renders Credited Service after his reemployment.

Notwithstanding the foregoing, for purposes of determining a Participant's Accrued Benefit under the Career Earnings Formula, following reemployment, no Credited Service shall be credited for any Anniversary Year subsequent to a Participant's separation from service with the Employer if such reemployment occurs on or after January 1, 2002.

**2.4 LEAVE OF ABSENCE.** A Participant on an unpaid leave of absence pursuant to the Employer's

normal personnel policies shall be credited with Hours of Service at his regularly-scheduled weekly rate while on such leave provided the Employer acknowledges in writing that the leave is with its approval. These Hours of Service shall be credited only for purposes of determining if a Break in Service has occurred and, unless specified otherwise by the Employer in writing, shall not be credited for any other purpose under the Plan. Hours of Service during a paid leave of absence shall be credited as provided in Section 1.25.

For any individual who is absent from work for any period by reason of the individual's pregnancy, birth of the individual's child, placement of a child with the individual in connection with the individual's adoption of the child, or by reason of the individual's caring for the child for a period beginning immediately following such birth or adoption, the Plan shall treat as Hours of Service, solely for determining if a Break in Service has occurred, the following Hours of Service:

(a) the Hours of Service which otherwise normally would have been credited to such individual but for such absence; or

(b) in any case where the Administrator is unable to determine the Hours of Service, on the basis of an assumed eight (8) hours per day.

Except as otherwise provided herein, in no event shall more than five hundred and one (501) of such hours be credited by reason of such period of absence. The Hours of Service shall be credited in the computation period (used for measuring years of Credited Service) which starts after the leave of absence begins. However, the Hours of Service shall instead be credited in the computation period in which the absence begins if it is necessary to credit the Hours of Service in that computation period to avoid the occurrence of a Break in Service.

Notwithstanding the foregoing, time spent on an authorized leave of absence shall be credited for the purpose of computing length of service and benefits payable under the Career Earnings Formula on the following basis: Participants shall receive credit for each full year spent on authorized leave of absence for each full year of Credited Service that they render to the Employer following return to active service, except that time spent on authorized leave of absence for medical reasons shall be credited without requirement of subsequent Credited Service and time spent on civic leave shall be credited upon return to active service.

## **2.5 SERVICE WITH RELATED COMPANIES.**

(a) Service with Related Group Participants. Except as otherwise provided, for each Plan Year in which the Employer is a member of a "related group", as hereinafter defined, all service of an Employee or Leased Employee (hereinafter collectively referred to as "Employee" solely for purposes of this Section 2.5(a)) with any one or more members of such related group shall be treated as employment by the Employer for purposes of determining his years of Credited Service (except for purposes of benefit accrual). The transfer of employment by any such Employee to another member of the related group shall not be deemed to constitute a retirement or other termination of employment by the Employer for purposes of the Plan, but the Employee shall be deemed to have continued in employment with the Employer for purposes of determining his years of Credited Service (except for purposes of benefit accrual). For purposes of this subsection (b), "related group" shall mean the Employer and all corporations, trades or businesses (whether or not incorporated) which constitute a controlled group of corporations with the Employer, a group of trades or businesses under common control with the Employer, or an affiliated service group, within the meaning of Section 414(b), Section 414(c), or Section 414(m), respectively, of the Code or any other entity required to be aggregated under Code Section 414(o).

(b) Construction. This Section is included in the Plan to comply with Code provisions regarding the crediting of service, and not to extend any additional rights to Employees in ineligible classifications other than as required by the Code and the regulations thereunder.

**2.6 COMPLIANCE WITH USERRA.** Notwithstanding any provisions of the Plan to the contrary, Employees shall receive service credit with respect to periods of qualified military service (within the meaning of Section 414(u)(5) of the Code) to the extent required under said Section 414(u).

**2.7 HEART ACT TREATMENT OF DIFFERENTIAL WAGE PAYMENTS.** For years beginning after

December 31, 2008, (i) a Participant receiving a differential wage payment, as defined by Code Section 3401(h)(2), shall be treated as an Employee of the Employer making the payment, (ii) the differential wage payment shall be treated as Earnings, and (iii) the Plan shall not be treated as failing to meet the requirements of any provision described in Code Section 414(u)(1)(C) by reason of any contribution or benefit which is based on the differential wage payment.

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### **ARTICLE THREE--PLAN PARTICIPATION**

**3.1 PARTICIPATION.** All Employees participating in the Plan prior to the Plan's restatement shall continue to be Participants, subject to the terms hereof.

Notwithstanding any provision of the Plan to the contrary, effective January 1, 2010, no Employee shall become a Participant, and any Participant who terminates employment, transfers employment to an excluded class of Employees (as described below), or otherwise ceases to be an active Participant in the Plan shall not again become an active Participant and shall not accrue any further benefits under the Plan at any future date as a result of reemployment or for any other reason.

In no event, however, shall any Employee (or other individual) participate under the Plan while he is:  
(i) included in a unit of Employees covered by a collective bargaining agreement between the Employer and the Employee representatives under which retirement benefits were the subject of good faith bargaining, unless the terms of such bargaining agreement expressly provides for the inclusion in the Plan; (ii) employed as an independent contractor on the payroll records of the Employer (regardless of any subsequent reclassification by the Employer, any governmental agency or court); or (iii) employed as a Leased Employee.

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## **ARTICLE FOUR—PLAN BENEFITS**

**4.1 NORMAL RETIREMENT BENEFIT.** Subject to the following provisions hereof, each Participant who retires at his Normal Retirement Date shall be entitled to receive a monthly retirement benefit determined as of such date. A Participant's right to his benefit shall be nonforfeitable upon reaching his Normal Retirement Age and shall be payable under the rules specified in Article Five. The amount of such annual benefit, expressed as a straight life annuity, shall be equal to the benefit determined under the applicable formula set forth below:

**(a) Career Earnings Formula.** The Career Earnings Formula shall be used to determine the Normal Retirement benefit of each Participant who was an Employee of the Employer on December 31, 2001; provided, however, that, in the case of a Participant who, following his termination of employment with the Employer, is reemployed by the Employer on or after January 1, 2002, the Career Earnings Formula shall not be applicable with respect to the Participant's period of employment with the Employer which occurs subsequent to the date of the Participant's reemployment. The benefit payable at the Normal Retirement Date of a Participant under the Career Earnings Formula shall be equal to the greater of:

- (1) 1.4% of the Participant's Career Earnings; or
  - (2) 1.75% of the Participant's Career Earnings, less 1.50% of his Primary Social Security Benefit,
- multiplied by his years of Credited Service, to a maximum of thirty-five (35) years of Credited Service.

Notwithstanding the foregoing, unless otherwise provided herein, each Section 401(a)(17) Participant's Accrued Benefit under the Career Earnings Formula shall be the greater of the Accrued Benefit determined for such Participant under (A) or (B) below:

(A) the Section 401(a)(17) Participant's Accrued Benefit determined with respect to the benefit formula applicable for the Plan Year beginning on or after January 1, 1994, as applied to such Participant's total years of Credited Service taken into account under the Career Earnings Formula for the purposes of benefit accrual, or

(B) the sum of:

- (i) the Section 401(a)(17) Participant's Accrued Benefit as of the last day of the last Plan Year beginning before January 1, 1994, frozen in accordance with Section 1.401(a)(4)-13 of the Treasury Regulations, and
- (ii) the Section 401(a)(17) Participant's Accrued Benefit determined under the benefit formula applicable for the Plan Year beginning on or after January 1, 1994, as applied to such Participant's years of Credited Service for Plan Years beginning on or after January 1, 1994, for purposes of benefit accrual.

For purposes of this subsection, a "Section 401(a)(17) Participant" means a Participant whose Accrued Benefit as of a date on or after the first day of the first Plan Year beginning on or after January 1, 1994, is based on Career Earnings for a year beginning prior to the first day of the first Plan Year beginning on or after January 1, 1994, that exceeded \$150,000.

In the case of any group or class of Participants, the Employer may limit the Prior Service (within the meaning of Section 2.1) of persons included in such group or class to service rendered on and after a date to be determined by the Employer.

Except in the case of a person in the service of a corporation which becomes an Employer, the Prior Service benefits of any Participant who was absent from the Employer during all or part of the calendar year next preceding the date he becomes a Participant, because of sickness, Disability, service in the armed forces of the United States, or like reasons beyond his control, and who entered the service of his Employer prior to such calendar year, shall be computed by crediting to him as Earnings for such calendar year the following Earnings:

(I) all Earnings actually received by such Participant in such calendar year before or after the period of absence from his Employer and

(II) the Earnings he would have received in such calendar year during the period of absence based on a forty-hour (40) week at his straight-time rate of pay at the time of leaving his Employer and any increased rate to which he would have been entitled as a result of automatic length-of-service increases or a general increase, and any bonuses or other payments made in such calendar year during such period of absence to which he would normally have been entitled.

(b) **Cash Balance Formula.** The Cash Balance Formula shall be used to determine the Normal Retirement benefit of each Participant whose employment with the Employer commences on or after January 1, 2002. The Cash Balance Formula shall also be used to determine the Normal Retirement benefit of any Participant who is reemployed by the Employer on or after January 1, 2002, with respect to the determination of such Participants' Normal Retirement Benefit attributable to service occurring subsequent to his reemployment date. Under no circumstances shall a Participant accrue benefits under the Career Earnings Formula and the Cash Balance Formula with respect to the same periods of Credited Service. The benefit payable at the Normal Retirement Date of a Participant under the Cash Balance Formula shall be equal to the sum of-

(1) Annual Pay Credits pursuant to Section 4.1(c); and

(2) Interest Credits pursuant to Section 4.1(d).

(c) **Annual Pay Credits.** As of the first day of each Plan Year, an Annual Pay Credit shall be credited to the Cash Balance Account of each Participant whose benefit is determined under the Cash Balance Formula (including each such Participant who retired, died, or otherwise terminated during the prior Plan Year), who received Earnings during the prior Plan Year. The Annual Pay Credit shall equal such Participant's Earnings for the prior Plan Year multiplied by five percent (5%).

Notwithstanding the foregoing, in the final year of a Participant's employment, an Annual Pay Credit shall be credited to such Participant's account, calculated by multiplying such Participant's Earnings in the current Plan Year up to the Participant's termination date by five percent (5%).

(d) **Interest Credits.** Interest Credits based on the amount of the Participant's Cash Balance Account as of the last day of each Plan Year shall be added to the Cash Balance Account of each Participant whose benefit is determined under the Cash Balance Formula as of the last day of the Plan Year, prior to the crediting of any Annual Pay Credit or other credit for the following Plan Year. In the final year of employment of each such Participant, interest at the same rate as used in determining the Interest Credit on the last day of the Plan Year in which the Participant's employment is terminated, shall be credited on a pro rata basis up to the date such Participant's benefits commence to the Participant's Cash Balance Account as of January 1 of the Plan Year in which the Participant's employment terminates. Effective January 21, 2004, the preceding sentence shall only apply if the Participant elects to receive his benefit prior to the end of the Plan Year in which the Participant's employment terminates and no additional Interest Credit shall be applied as of the end of the Plan Year to any Annual Pay Credit accrued to a Participant's Cash Balance Account based on his Earnings in the final year of the Participant's employment where the Participant elected to receive his benefit prior to the end of the Plan Year in which the Participant's employment terminates. Except as provided below, Interest Credits shall cease once benefit payments have commenced to the Participant.

If a Participant who is receiving benefits in any form other than a lump-sum payment is re-employed, interest hereunder shall not be credited to the Participant's Cash Balance Account used to determine such benefits but shall be credited to a new Cash Balance Account established on behalf of such Participant, provided that such a Participant who is re-employed on or after January 1, 2010 shall not be entitled to any further Annual Pay Credits or Interest Credits.

The rate of interest for Interest Credits for Plan Years beginning after December 31, 2004 shall be the one-year constant maturity Treasury Bond rate (or generally accepted proxy therefor (as published by the U.S. Federal Reserve Board)) for the month of November of the immediately preceding Plan Year plus one percentage point. The rate of interest for Interest Credits for Plan Years beginning on January 1, 2002 through January 1, 2004 shall be the

twelve (12)-month average of the thirty (30)-year constant maturity Treasury Bond rates (or the generally accepted proxy therefor) as published by the U.S. Federal Reserve Board, determined for the twelve (12)-months ending in November of the immediately preceding year. Notwithstanding any other provision of the Plan to the contrary, an Employer reserves the right to change the interest rate used to determine the Interest Credits at any time prior to the end of the Plan Year in which such credit is added to the Participant's Cash Balance Account.

Effective for Plan Years beginning after December 31, 2007, and solely with respect to Participants who have one (1) Hour of Service on or after December 31, 2007, the interest rate used for Interest Credits for any Plan Year shall not exceed a market rate of return. In addition, and regardless of the rate specified in the Plan, an Interest Credit (or equivalent amount) of less than zero shall in no event result in the Cash Balance Account or similar amount being less than the aggregate account of contributions credited to the Cash Balance Account.

Notwithstanding the foregoing, upon termination of the Plan,

- (i) if the interest credit rate (or equivalent amount) under the Plan is a variable rate, the rate of interest used to determine Accrued Benefits under the Plan attributable to the Cash Balance Account shall be equal to the average of the rates of interest used under the Plan during the five (5) year period ending on the termination date; and
- (ii) with respect to the portion of the Accrued Benefit attributable to the Cash Balance Account, the interest rate and mortality table used to determine the amount of any benefit under the Plan payable in the form of an annuity at Normal Retirement Date shall be the rate and table specified under the Plan for such purpose as of the termination date, except that if such interest rate is a variable rate, the interest rate shall be determined under the rules of subclause (i) above.

The foregoing provisions shall be operated and interpreted in accordance with Section 411(b)(5) of the Code (as amended from time to time) and regulatory guidance issued thereunder.

**4.2 DEFERRED RETIREMENT BENEFIT.** A Participant who retires from employment with the Employer after his Normal Retirement Date shall be eligible to receive distribution of his vested Accrued Benefit following his Deferred Retirement Date. In no event, however, shall distribution of the Participant's vested Accrued Benefit be made or commence later than the Participant's required beginning date, as defined in Section 5.8(f)(iv).

To the extent required by law, in the event a Participant is employed after attaining age seventy and one-half (70½), his Accrued Benefit shall be actuarially increased, to take into account the period after age 70½ in which the Participant was not receiving any benefits under the Plan, in accordance with Section 401(a)(9)(C)(iii) of the Code and regulatory guidance thereunder.

Notwithstanding any other provision of this Plan, with respect to the period from a Participant's Normal Retirement Date to his termination of employment, the Participant shall receive benefit payments under this Plan for each month in which he is compensated for fewer than 40 Hours of Service.

#### **4.3 DISABILITY.**

(a) **Effect of Disability on Benefits Under the Career Earnings Formula.** Upon becoming Disabled, a Participant who has completed at least three (3) years of Credited Service shall be eligible for Disability Leave Status. Such status may be terminated or suspended by the Administrator if at any time before Normal Retirement Age the Participant again engages in regular full-time employment, fails or refuses to undergo any medical examination ordered by the Administrator, or the Administrator determines on the basis of a medical examination that the Participant has sufficiently recovered to engage in regular full-time employment. While on Disability Leave Status, a Participant shall be credited with Credited Service, and with Earnings at the same rate as he had earned in the calendar year prior to the calendar year in which he became Disabled, until the Participant retires, dies, reached his Normal Retirement Age, or his Disability Leave Status is sooner terminated or suspended.

**(b) Effect of Disability on Benefits Under the Cash Balance Formula.** If a Participant who has completed at least three (3) years of Credited Service and who is an Employee suffers a Disability prior to termination, and, for reasons thereof, the Participant's status as an Employee ceases, then such Participant shall continue to be credited with Annual Pay Credits and Interest Credits during the period of such Disability as described below and as provided in Section 4.1, as if the individual were still actively employed. For the purpose of determining a Disabled Participant's Annual Pay Credits for any Plan Year, such Participant's Earnings for any period of Disability shall be equal to the Participant's Earnings during the full calendar year immediately preceding the date of such Disability (annualized in the event the Participant did not receive twelve (12) full months of Earnings). Additionally, years of Credited Service (determined on the basis of the Participant's regularly scheduled Hours of Service as of the date immediately preceding the date of such Disability) shall continue to be credited during the period in which credits continue to be credited to the Participant's Cash Balance Account. Annual Pay Credits for a Plan Year shall be determined based on the Disabled Participant's attained age and Anniversary Years (including the additional service described above) as of the immediately preceding December 31. However, such credits shall cease upon the earliest to occur of:

- (1) the day on which the Participant's long-term disability plan payments cease;
- (2) the day the Participant dies;
- (3) the date the Participant begins to receive benefit payments under the Plan; or
- (4) the fifth (5<sup>th</sup>) anniversary of the last day the Participant was actively at work prior to such Disability, as determined by the Administrator.

#### **4.4 VESTING AND EARLY COMMENCEMENT.**

(a) **Commencement of Vested Benefits at Normal Retirement Date.** A Participant who terminates employment with the Employer, for any reason other than his death, Disability or termination of employment on or after his Normal Retirement Date, after completing at least three (3) years of Credited Service shall be entitled to receive a benefit commencing at his Normal Retirement Date calculated in accordance with Section 4.1, the monthly amount of which, if such benefit were paid in the form of a single life annuity, shall be equal to the Participant's Accrued Benefit at his annuity starting date (within the meaning of Section 5.2(d)) under the Career Earnings Formula and/or the Actuarial Equivalent of his Cash Balance Account at such annuity starting date, as the case may be. Subject to the provisions of Article Five, any benefit payable under this Section shall be made pursuant to the provisions of Article Five.

(b) **Commencement of Vested Retirement Benefits Before Normal Retirement Date.**

(1) **Provisions Applicable to Accrued Benefits Attributable to the Cash Balance Formula.** Subject to the provisions of Article Five, a Participant who terminates employment after completing three (3) or more years of Credited Service shall be entitled to elect that the benefit payable pursuant to the Cash Balance Formula, if any, commence on the first day of any month coincident with or next following his termination up to his Normal Retirement Date.

(2) **Provisions Applicable to Commencement of Vested Retirement Benefits Attributable to the Career Earnings Formula.** The benefit determined under the Career Earnings Formula of a Participant whose termination from employment date occurs prior to his Normal Retirement Date shall not commence until the Participant's Normal Retirement Date, except as follows:

- (A) A Participant whose termination from employment occurs on or after the Participant's attainment of age fifty-five (55) and following his completion of at least ten (10) years of Credited Service may elect to commence his benefit as of the first day of any month prior to the Participant's Normal Retirement Date. If such a Participant elects an annuity starting date that is prior to the Participant's Normal Retirement Date, the retirement benefit payable as of such date shall equal the Participant's Accrued Benefit multiplied by the applicable percentages

contained in Schedule A;

(B) A Participant whose termination from employment occurs on or after the date as of which the sum of the Participant's age and the Participant's years of Credited Service equal or exceed a total of ninety (90) years, may elect to commence his benefit as of the first day of any month on or after the Participant's attainment of age fifty-five (55) and prior to the Participant's Normal Retirement Date. If such a Participant elects an annuity starting date that is prior to the Participant's Normal Retirement Date, the benefit payable as of such date shall equal the Participant's Accrued Benefit multiplied by the applicable percentages contained in Schedule B;

(C) A Participant whose termination from employment occurs on or after the date as of which the Participant has completed three (3) or more years of Credited Service, but prior to the date as of which the Participant satisfies the requirements of Sections 4.4(b)(2)(A) and (B), such Participant may elect to commence his benefit as of the first day of any month prior to the Participant's Normal Retirement Date on or after the Participant has attained age fifty-five (55). If such a Participant elects an annuity starting date that is prior to the Participant's Normal Retirement Date, the benefit payable as of such date shall equal the Participant's Accrued Benefit multiplied by the applicable percentages contained in Schedule C.

(D) The foregoing notwithstanding, the benefit of a Participant who has completed at least three (3) years of Credited Service shall in no event be less than the benefit to which the Participant would have been entitled had he terminated employment on December 31, 1993, under the terms and conditions of the Plan as then in effect (the "1993 Annuity"). A Participant may elect to receive his 1993 Annuity, if any, prior to attaining age fifty-five (55) but in no event prior to attaining age fifty (50). If such a Participant elects an annuity starting date for this 1993 Annuity that is prior to the Participant attaining age fifty-five (55), the benefit payable as of such date shall equal the Participant's 1993 Annuity, reduced by 4% for each year (or portion thereof determined on a monthly basis) that it is received prior to age sixty-five (65), measured from the annuity starting date.

If a Participant makes such an election, the remaining portion of his Accrued Benefit, if any, determined as of the date he elects to receive the 1993 Annuity and expressed as a benefit payable at age sixty-five (65), shall be the amount obtained by subtracting the Participant's reduced 1993 Annuity from the product of his Accrued Benefit multiplied by the Actuarial Factor. The resulting net benefit amount, if any, shall then be divided by the Actuarial Factor to obtain the remaining benefit payable at age sixty-five (65). For purposes of this computation, the "Actuarial Factor" shall mean the product of 40% multiplied by the Actuarial Equivalent benefit of an annual benefit of \$1 commencing at age fifty-five (55), determined as of the date the Participant begins to receive his 1993 Annuity. The remaining portion of the Accrued Benefit so determined shall be payable under the terms and conditions of the Plan in effect at the Participant's termination of employment.

A Participant who terminates employment with a vested right to his 1993 Annuity may elect to receive the 1993 Annuity in any of the optional forms of benefit available to such Participant as in effect under the Plan on December 31, 1993.

(e) The nonvested portion of a Participant's Accrued Benefit shall be forfeited as of the earlier of (i) the last day of the Plan Year in which the Participant receives distribution of his vested Accrued Benefit, or (ii) the last day of the Plan Year in which the Participant incurs five (5) consecutive Breaks in Service. For this purpose, a Participant who is not vested in any portion of his Accrued Benefit as of the date he separates from service shall be deemed to have received distribution of his Accrued Benefit as of the end of the Plan Year following the Plan Year in which he terminates employment.

#### **4.5 ADJUSTMENT FOR IN-SERVICE PAYMENTS.**

In the case of a Participant whose benefit payments commence prior to his termination from employment:

(a) Retirement benefits payable under the Career Earnings Formula shall be reduced to reflect the Actuarial Equivalent value of amounts previously paid to the Participant; and

(b) the Participant's benefit determined under the Cash Balance Formula shall be adjusted, if appropriate, in each calendar year beginning after the Participant's annuity starting date, to reflect changes in his Accrued Benefit resulting from adjustments to the Participant's Cash Balance Account for the next preceding calendar year.

#### **4.6 TRANSFER OF EMPLOYMENT.**

Except as otherwise specified herein, in the case of a Participant who transfers from employment with an Employer to a "related group member" (within the meaning of Section 2.5) which has not adopted the Plan, such Participant shall not earn Credited Service for Anniversary Years during which the Participant is employed by such related group member, nor shall the Participant's Earnings be recognized with respect to such period. No Annual Pay Credits shall be made to the Participant's Cash Balance Account with respect to the period of such Participant's employment with such related group member, however, such Participant's Cash Balance Account shall continue to be credited with Interest Credits during such period until the end of the month prior to the month in which payment under the Plan commences.

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## **ARTICLE FIVE--TIME AND MODE OF DISTRIBUTION OF PLAN BENEFITS**

**5.1 NORMAL FORM OF BENEFIT.** In the case of an unmarried Participant, the normal form of benefit shall be a single-life annuity. Under such form, monthly benefits shall be paid for the lifetime of the Participant. For a married Participant, the provisions of Section 5.2 shall apply in lieu of this Section. Alternatively, a Participant shall be permitted to select any of the available options in Section 5.3, subject to the restrictions contained in Section 5.3.

Notwithstanding the foregoing, if the Actuarial Equivalent lump sum value of the Participant's vested Accrued Benefit does not exceed \$1,000, the Participant's entire vested Accrued Benefit shall be distributed to the Participant (or, in the event of the Participant's death, his Beneficiary) in a lump-sum payment as soon as administratively practicable following the date the Participant retires, dies or otherwise terminates from employment.

**5.2 JOINT AND SURVIVOR ANNUITY.** For any Participant who is married on his "annuity starting date" (defined below), his benefit under the Plan shall be paid in the form of a "qualified joint and survivor annuity" (defined below) unless the Participant, with the consent of his spouse, elects to waive such form of benefit during the election period described in paragraph (d) below; provided, however, that the consent of the Participant's spouse shall not be required if the Participant selects an option set forth in Section 5.3(b) with his spouse as his Beneficiary.

(a) The "qualified joint and survivor annuity" means an annuity for the life of the Participant with a survivor annuity for the life of the Participant's surviving spouse equal to fifty percent (50%) of the amount of the annuity payable during the joint lives of the Participant and the Participant's spouse. The qualified joint and survivor annuity shall be the Actuarial Equivalent of the Participant's Accrued Benefit payable in the normal form specified under Section 5.1 for an unmarried Participant.

(b) The Participant may elect to waive the qualified joint and survivor annuity form of benefit at any time during the election period. Such an election must be made in writing on a form acceptable to the Administrator. However, an election to waive the qualified joint and survivor annuity shall not take effect unless (1) the Participant's spouse consents in writing to the election, (2) the election designates a specific alternate Beneficiary, if applicable, which may not be changed without spousal consent (unless the Participant's spouse expressly permits designations by the Participant without any further spousal consent), (3) the spouse's consent acknowledges the effect of the election, and (4) the spouse's consent is witnessed by a notary public. In addition, a Participant's waiver of the qualified joint and survivor annuity shall not be effective unless the election designates a form of benefit payment which may not be changed without spousal consent (or the Participant's spouse expressly permits designation by the Participant without any further spousal consent). Notwithstanding the foregoing, spousal consent hereunder shall not be required if it is established to the satisfaction of the Administrator that the spouse's consent cannot be obtained because such spouse cannot be located, or because of such other circumstances as may be prescribed in Section 417 of the Code or regulatory guidance promulgated thereunder.

(c) Any consent by a spouse obtained under this Section (or establishment that the consent of a spouse may not be obtained) shall be effective only with respect to such spouse. A consent that permits designations by the Participant without any requirement of further consent by such spouse must acknowledge that the spouse has the right to limit consent to a specific Beneficiary, and/or a specific form of benefit where applicable, and that the spouse voluntarily elects to relinquish either or both of such rights. No consent obtained under this provision shall be valid unless the Participant has received notice as provided below. In addition, any waiver made in accordance with this Section may be revoked at any time prior to the commencement of benefits under the Plan in accordance with procedures established by the Administrator. A Participant is not limited to the number of revocations or elections that may be made hereunder.

(d) The "election period" under this Section shall be the one hundred eighty (180) days) period prior to the "annuity starting date," which date shall be the first day of the first period in which an amount is payable as an annuity or, if such benefit is not payable as an annuity, the first day on which the Participant may begin to receive a distribution from the Plan.



(e) The Administrator shall provide to each Participant, not less than thirty (30) days, and not more than one hundred eighty (180) days, prior to the annuity starting date, a written explanation of:

- (1) the terms and conditions of the qualified joint and survivor annuity;
- (2) the Participant's right to make, and the effect of, an election to waive such annuity;
- (3) the right of the Participant's spouse regarding the required spousal consent to an election to waive the qualified joint and survivor annuity;
- (4) the right to make, and the effect of, a revocation of an election to waive such annuity; and
- (5) the relative values of the forms of benefit available under the Plan.

The description of a Participant's right, if any, to defer distribution shall also describe the consequences of failing to defer receipt of the distribution in accordance with the requirements of applicable law.

(f) Notwithstanding anything contained herein to the contrary, if the Actuarial Equivalent lump sum value of a Participant's Accrued Benefit does not exceed \$1,000, distribution of the Participant's vested Accrued Benefit shall be made in the form of a lump-sum payment in accordance with the provisions of Section 5.1 above.

A Participant who elects to waive the "qualified joint and survivor annuity" form of benefit shall be entitled to elect the "qualified optional survivor annuity" at any time during the applicable election period. Any such election shall not be subject to the spousal consent requirements of Section 5.2(b). Furthermore, the written explanation of the joint and survivor annuity shall explain the terms and conditions of the qualified optional survivor annuity.

For such purposes, the term "qualified optional survivor annuity" means an annuity:

- (1) for the life of the Participant, with a survivor annuity for the life of the spouse which is equal to the "applicable percentage" of the amount of the annuity which is payable during the joint lives of the Participant and his or her spouse; and
- (2) which is the Actuarial Equivalent of the Participant's Accrued Benefit payable in the normal form specified under Section 5.1 for an unmarried Participant.

Such term also includes any annuity in a form having the effect of an annuity described in the preceding sentence.

The "applicable percentage" shall be based on the survivor annuity percentage (i.e., the percentage which the survivor annuity under the Plan's qualified joint and survivor annuity bears to the annuity payable during the joint lives of the Participant and his or her spouse). For this purpose, if the survivor annuity percentage is less than seventy-five percent (75%), then the "applicable percentage" shall be seventy-five percent (75%); otherwise, the "applicable percentage" shall be fifty percent (50%).

**5.3 OPTIONAL FORMS OF BENEFIT PAYMENTS.** In lieu of the normal forms of benefit described under Sections 5.1 and 5.2, a Participant may elect to receive (with the consent of his spouse, if required under Section 5.2) any of the alternative forms of benefit described below, provided that a Participant who has not satisfied the requirements of Section 4.4(b)(2)(A) or Section 4.4(b)(2)(B) as of his date of termination of employment may not elect the forms of payment described in Sections 5.3(b), (c), or (d), except that a Participant with a benefit under the Cash Balance Formula may elect a lump sum form of payment under Section 5.3(d):

- (a) A monthly benefit payable to and during the lifetime of the Participant with benefit payments ceasing in the month of the Participant's death; or
- (b) A monthly benefit payable to and during the lifetime of the Participant with the provision that after his death, a monthly benefit at the rate of 50%, 75% or 100% of his monthly benefit shall then be paid to and during the lifetime of his designated Beneficiary; provided, however, that payments

under this option shall be restricted to the extent required to ensure compliance with minimum distribution incidental death benefit requirement of Section 401(a)(9) of the Code and the regulations promulgated thereunder; or

(c) If the Participant's benefit is to commence prior to the Participant's Normal Retirement Date, the Participant may elect to convert the benefit otherwise payable to him into a benefit of an Actuarial Equivalent value of such amount so that with his expected Social Security benefit, he shall receive, so far as possible, the same amount each year before and after such expected Social Security benefit commences. A Participant whose benefit commences before he reaches age sixty-two (62) may elect the level income option based on his Social Security benefit as of age sixty-two (62) or his Social Security benefit as of age sixty-five (65). A Participant whose benefit commences after he reaches age sixty-two (62) may only elect the level income option based on his Social Security benefit as of age sixty-five (65). Monthly payments shall terminate upon the death of the Participant unless the Participant elected the level income option in conjunction with the "qualified joint and survivor annuity under Section 5.2 or the joint and contingent annuity option described in Section 5.3(b), in which event payments shall continue pursuant to such election if the Participant's spouse or Beneficiary, as applicable, survives the Participant.

A Participant may not elect this level income option if the Participant's monthly payments under the option would be equal to zero (0) following the Participant's attainment of age sixty-two (62) or age sixty-five (65), as applicable, nor may a Participant elect this option in conjunction with a 75% joint and contingent annuity option described in Section 5.3(b).

(d) With respect to a benefit determined under the Career Earnings Formula, a Participant may elect to receive his benefit in the form of a lump sum payment; provided that (i) the election to receive such lump sum must be made no later than the end of the second calendar month following the Participant's retirement and (ii) distribution must be made no later than the second calendar month following the Participant's retirement. Such lump sum shall be the Actuarial Equivalent of the Participant's Accrued Benefit. With respect to a benefit determined under the Cash Balance Formula, a Participant may elect to receive his benefit in the form of a lump sum, which lump sum shall be equal to the amount credited to his Cash Balance Account as of the last day of the month next preceding his benefit commencement date.

Any of the alternative forms of benefit set forth shall be the Actuarial Equivalent to the normal form of benefit described in Section 5.1 for an unmarried Participant.

Benefit elections shall be made and filed in accordance with uniform administrative procedures established by the Administrator.

If the Beneficiary dies after the election of an option but prior to the commencement of payments to the Participant, the election shall be null and void and the Participant may elect any alternative form of payment, subject to the foregoing provisions of the Article Five. If the Beneficiary dies following the commencement of monthly payments to a Participant under Section 5.3(b) or (c), payment of the monthly benefit shall continue only to the Participant.

**5.4 REVOCATION OR CHANGE OF OPTIONAL FORM.** A Participant may revoke or change any election previously made, or deemed to be made under this Article Five, at any time prior to benefit commencement in accordance with procedures established by the Administrator, subject to the spousal consent and other requirements of this Article Five. A Participant is not limited to the number of revocations or elections that may be made hereunder. Once payments commence, there can be no revocation or change to the form of benefit or, if applicable, to the Beneficiary under a joint and survivor form of benefit.

**5.5 TIME OF COMMENCEMENT OF RETIREMENT PAYMENTS.** Subject to the following provisions of this Section, unless the Participant elects otherwise, distribution of the Participant's vested Accrued Benefit shall be made or commence no later than the sixtieth (60) day after the latest of the close of the Plan Year in which: (a) the Participant attains age sixty-five (65) (or Normal Retirement Date, if earlier), (b) occurs the 10<sup>th</sup> anniversary of the year in which the Participant commenced participation in the Plan, or (c) the Participant terminates service with the Employer. However if the Actuarial Equivalent lump-sum value of the Participant's vested Accrued Benefit exceeds \$1,000, distribution of his benefit shall not commence prior to such Participant's Normal

Retirement Date unless the Participant otherwise elects in writing.

If a Participant terminates employment for any reason other than retirement, Disability or death, distribution of his vested Accrued Benefit shall normally commence as soon as administratively practical following the close of the Plan Year in which he attains his Normal Retirement Date.

In no event, however, shall distribution of the Participant's vested Accrued Benefit be made or commence later than the Participant's required beginning date, as defined in Section 5.8(f)(iv).

**5.6 REEMPLOYMENT.** In the case of a Participant who is reemployed before January 1, 2010 by the Employer after he has received or begun to receive benefits under the Plan, such Participant's participation in the Plan shall resume as of the date of such Participant's reemployment and benefit payments under the Plan shall be suspended during the period of his reemployment with respect to benefits accrued prior to such reemployment, subject to the terms of the Plan then in effect. In the case of a Participant who is reemployed on or after January 1, 2010 by the Employer after he had received or begun to receive benefits under the Plan, such Participant's participation in the Plan shall not resume for purposes of benefit accrual and benefit payment shall not be suspended.

**5.7 NOTICE TO EMPLOYEES.** If a Participant's monthly retirement benefits are suspended under Section 5.6 or due to continued employment past Normal Retirement Age, the Administrator shall notify the Participant of the suspension; such notice shall contain such information and shall be given at such time as may be required by applicable law or regulation.

#### **5.8 MINIMUM DISTRIBUTION RULES.**

##### **(a) General Rules.**

(i) **Application.** The provisions of this Section 5.8 shall apply for purposes of determining required minimum distributions.

(ii) **Precedence.** The requirements of this Section 5.8 shall take precedence over any inconsistent provisions of the Plan; provided, however, that this Section 5.8 shall not require the Plan to provide any form of benefit, or any option, not otherwise provided under Section 5.1, 5.2, or 5.3.

(iii) **Requirements of Treasury Regulations Incorporated.** All distributions required under this Section shall be determined and made in accordance with the Treasury regulations under Section 401(a)(9) of the Code, including the incidental death benefit requirement in Section 401(a)(9)(G) and regulatory guidance issued thereunder.

(iv) **TEFRA Section 242(b)(2) Elections.** Notwithstanding the other provisions of this Section, other than subsection (i) above, distributions may be made under a designation made before January 1, 1984, in accordance with Section 242(b)(2) of the Tax Equity and Fiscal Responsibility Act (TEFRA) and the provisions of the Plan that relate to Section 242(b)(2) of TEFRA.

##### **(b) Time and Manner of Distributions.**

(i) **Required Beginning Date.** The Participant's entire interest shall be distributed, or begin to be distributed, to the Participant no later than the Participant's required beginning date.

(ii) **Death of Participant Before Distributions Begin.** If the Participant dies before distributions begin, the Participant's entire interest shall be distributed, or begin to be distributed, no later than as follows:

(1) If the Participant's surviving spouse is the Participant's sole designated Beneficiary, then, except as provided in the Plan, distributions to the surviving spouse shall begin by December 31 of the calendar year immediately following the calendar year in which the Participant died, or by December 31 of the calendar year in which the Participant would have attained age 70 1/2, if later.

(2) If the Participant's surviving spouse is not the Participant's sole designated Beneficiary, and if distribution is to be made over the life of, or over a period certain not exceeding the life expectancy of, the designated Beneficiary (if permitted or required under Section 5.3 or Article Six), distribution to the designated Beneficiary shall begin by December 31 of the calendar year immediately following the calendar year in which the Participant died.

(3) If there is no designated Beneficiary as of September 30 of the year following the year of the Participant's death, or if the provisions of subsection (1) and (2) do not otherwise apply, the Participant's entire interest shall be distributed by December 31 of the calendar year containing the fifth annual anniversary of the Participant's death.

(4) If the Participant's surviving spouse is the Participant's sole designated Beneficiary and the surviving spouse dies after the Participant but before distributions to the surviving spouse begin, this Section 5.8(b)(ii), other than Section 5.8(b)(ii)(1), shall apply as if the surviving spouse were the Participant.

For purposes of this Section 5.8(b)(ii) and Section 5.8(e), distributions are considered to begin on the Participant's required beginning date (or, if Section 5.8(b)(ii)(4) applies, the date distributions are required to begin to the surviving spouse under Section 5.8(b)(ii)(1)). If annuity payments irrevocably commence to the Participant before the Participant's required beginning date (or to the Participant's surviving spouse before the date distributions are required to begin to the surviving spouse under Section 5.8(b)(ii)(1)), the date distributions are considered to begin is the date distributions actually commence.

(iii) **Form of Distribution.** Unless the Participant's interest is distributed in the form of an annuity purchased from an insurance company or in a single sum on or before the required beginning date, as of the first distribution calendar year, distributions shall be made in accordance with Sections 5.8(c), 5.8(d) and 5.8(e). If the Participant's interest is distributed in the form of an annuity purchased from an insurance company, distributions thereunder shall be made in accordance with the requirements of Section 401(a)(9) of the Code and the Treasury regulations. Any part of the Participant's interest which is in the form of an individual account described in Section 414(k) of the Code shall be distributed in a manner satisfying the requirements of Section 401(a)(9) of the Code and the Treasury regulations that apply to individual accounts.

**(c) Determination of Amount to be Distributed Each Year.**

(i) **General Annuity Requirements.** If the Participant's interest is paid in the form of an annuity under the Plan, payments under the annuity shall satisfy the following requirements:

(1) the annuity distributions shall be paid in periodic payments made at intervals not longer than one year;

(2) the distribution period shall be over a life (or lives) or over a period certain not longer than the period described in Section 5.8(d) or 5.8(e);

(3) once payments have begun over a period certain, the period certain shall not be changed even if the period certain is shorter than the maximum permitted;

(4) payments shall either be nonincreasing or increase only as follows:

(A) by an annual percentage increase that does not exceed the annual percentage increase in a cost-of-living index that is based on prices of all items and issued by the Bureau of Labor Statistics;

(B) to the extent of the reduction in the amount of the Participant's payments to provide for a survivor benefit upon death, but only if the Beneficiary whose life was being used to determine the distribution period described in Section 5.8(d) dies or is no longer the Participant's Beneficiary pursuant to a qualified domestic relations order within the meaning of Section 414(p);

(C) to provide cash refunds of employee contributions upon the Participant's

death; or

(D) to pay increased benefits that result from a Plan amendment.

(ii) **Amount Required to be Distributed by Required Beginning Date** . The amount that must be distributed on or before the Participant's required beginning date (or, if the Participant dies before distributions begin, the date distributions are required to begin under Section 5.8(b)(ii)(1) or (ii)(2)) is the payment that is required for one payment interval. The second payment need not be made until the end of the next payment interval even if that payment interval ends in the next calendar year. Payment intervals are the periods for which payments are received, e.g., bi-monthly, monthly, semi-annually, or annually. All of the Participant's benefit accruals as of the last day of the first distribution calendar year shall be included in the calculation of the amount of the annuity payments for payment intervals ending on or after the Participant's required beginning date.

(iii) **Additional Accruals After First Distribution Calendar Year** . Any additional benefits accruing to the Participant in a calendar year after the first distribution calendar year shall be distributed beginning with the first payment interval ending in the calendar year immediately following the calendar year in which such amount accrues.

**(d) Requirements for Annuity Distributions that Commence During Participant's Lifetime.**

(i) **Joint Life Annuities Where the Beneficiary Is Not the Participant's Spouse** . If the Participant's interest is being distributed in the form of a joint and survivor annuity for the joint lives of the Participant and a nonspouse Beneficiary, annuity payments to be made on or after the Participant's required beginning date to the designated Beneficiary after the Participant's death must not at any time exceed the applicable percentage of the annuity payment for such period that would have been payable to the Participant using the table set forth in Q&A-2 of Section 1.401(a)(9)-6 of the Treasury regulations. If the form of distribution combines a joint and survivor annuity for the joint lives of the Participant and a nonspouse Beneficiary and a period certain annuity, the requirement in the preceding sentence shall apply to annuity payments to be made to the designated Beneficiary after the expiration of the period certain.

(ii) **Period Certain Annuities** . Unless the Participant's spouse is the sole designated Beneficiary and the form of distribution is a period certain and no life annuity, the period certain for an annuity distribution commencing during the Participant's lifetime may not exceed the applicable distribution period for the Participant under the Uniform Lifetime Table set forth in Section 1.401(a)(9)-9 of the Treasury regulations for the calendar year that contains the annuity starting date. If the annuity starting date precedes the year in which the Participant reaches age 70, the applicable distribution period for the Participant is the distribution period for age 70 under the Uniform Lifetime Table set forth in Section 1.401(a)(9)-9 of the Treasury regulations plus the excess of 70 over the age of the Participant as of the Participant's birthday in the year that contains the annuity starting date. If the Participant's spouse is the Participant's sole designated Beneficiary and the form of distribution is a period certain and no life annuity, the period certain may not exceed the longer of the Participant's applicable distribution period, as determined under this Section 5.8(d), or the joint life and last survivor expectancy of the Participant and the Participant's spouse as determined under the Joint and Last Survivor Table set forth in Section 1.401(a)(9)-9 of the Treasury regulations, using the Participant's and spouse's attained ages as of the Participant's and spouse's birthdays in the calendar year that contains the annuity starting date.

**(e) Requirements for Minimum Distributions Where Participant Dies Before Distributions Begin.**

(i) **Participant Survived by Designated Beneficiary** . Except as provided in the Plan, if the Participant dies before the date distribution of his or her interest begins and there is a designated Beneficiary, the Participant's entire interest shall be distributed, beginning no later than the time described in Section 5.8(b)(ii)(1) or (ii)(2), over the life of the designated Beneficiary or over a period certain not exceeding:

(1) unless the annuity starting date is before the first distribution calendar year, the life expectancy of the designated Beneficiary determined using the Beneficiary's age as of the Beneficiary's birthday in the calendar year immediately following the calendar year of the Participant's death; or

(2) if the annuity starting date is before the first distribution calendar year, the life expectancy of the designated Beneficiary determined using the Beneficiary's age as of the Beneficiary's birthday in the calendar year that contains the annuity starting date.

(ii) **No Designated Beneficiary.** If the Participant dies before the date distributions begin and there is no designated Beneficiary as of September 30 of the year following the year of the Participant's death, distribution of the Participant's entire interest shall be completed by December 31 of the calendar year containing the fifth annual anniversary of the Participant's death.

(iii) **Death of Surviving Spouse Before Distributions to Surviving Spouse Begin .** If the Participant dies before the date distribution of his or her interest begins, the Participant's surviving spouse is the Participant's sole designated Beneficiary, and the surviving spouse dies before distributions to the surviving spouse begin, this Section 5.8(e) shall apply as if the surviving spouse were the Participant, except that the time by which distributions must begin shall be determined without regard to Section 5.8(b)(ii)(1).

(f) **Definitions.**

(i) **Designated Beneficiary.** The individual who is designated as the Beneficiary under Section 5.3, 6.1 or 6.2 of the Plan, as applicable, and is the designated Beneficiary under Section 401(a)(9) of the Internal Revenue Code and Section 1.401(a)(9)-4 of the Treasury regulations.

(ii) **Distribution Calendar Year.** A calendar year for which a minimum distribution is required. For distributions beginning before the Participant's death, the first distribution calendar year is the calendar year immediately preceding the calendar year which contains the Participant's required beginning date. For distributions beginning after the Participant's death, the first distribution calendar year is the calendar year in which distributions are required to begin pursuant to Section 5.8(b)(ii).

(iii) **Life expectancy.** Life expectancy as computed by use of the Single Life Table in Section 1.401(a)(9)-9 of the Treasury regulations.

(iv) **Required beginning date.** In no event shall distribution of the Participant's vested Accrued Benefit be made or commence later than the April 1st following the end of the calendar year in which the Participant attains age seventy and one-half (70½), or, except for a Participant who is a five percent (5%) owner of the Employer (within the meaning of Section 401(a)(9)(C) of the Code), if later, the April 1st following the calendar year in which the Participant retires from employment with the Employer (the "required beginning date").

**5.9 ELIGIBLE ROLLOVER DISTRIBUTIONS.** Notwithstanding the foregoing provisions of this Article Five, the provisions of this Section 5.9 shall apply to distributions made under the Plan.

(a) A "Distributee" (as hereinafter defined) may elect, at the time and in the manner prescribed by the Administrator, to have any portion of an "eligible rollover distribution" (as hereinafter defined) paid directly to an eligible retirement plan specified by the Distributee in a direct rollover.

(b) Definitions:

(i) **Eligible Rollover Distribution.** An eligible rollover distribution is any distribution made to the Distributee, except that an eligible rollover distribution does not include: any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or life expectancy) of the Distributee or the joint lives (or joint life expectancies) of the Distributee and the Distributee's designated Beneficiary, or for a specified period of ten (10) years or more; any distribution to the extent such distribution is required under Section 401(a)(9) of the Code; any hardship distribution described in Section

401(k)(2)(B)(i)(IV) of the Code. A portion of a distribution shall not fail to be an eligible rollover distribution merely because the portion consists of after-tax employee contributions which are not includible in gross income

(ii) *Eligible Retirement Plan*. An eligible retirement plan is an individual retirement account described in Section 408(a) of the Code, an individual retirement annuity described in Section 408(b) of the Code, a Roth IRA described in Code Section 408A(b) (subject to the requirement of applicable law), an annuity plan described in Section 403(a) of the Code, a qualified trust described in Section 401(a) of the Code, an annuity contract described in Section 403(b) of the Code and an eligible plan under Section 457(b) of the Code which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state and which agrees to separately account for amounts transferred into such plan from this Plan, that accepts the Distributee's eligible rollover distribution. The definition of eligible retirement plan shall also apply in the case of a distribution to a surviving spouse, or to a spouse or former spouse who is an alternate payee under a qualified domestic relations order, as defined in Section 414(p) of the Code.

Notwithstanding the foregoing, (A) with respect to any after-tax contributions, an eligible retirement plan is an individual retirement account or annuity described in Section 408(a) or 408(b) of the Code, a qualified plan or a 403(b) plan that agrees to separately account for amounts so transferred, including accounting separately for the portion(s) of such distribution which are includable, and not includable, in gross income, and (B) for a Distributee who is a non-spouse "designated beneficiary," an eligible retirement plan is an individual retirement account (or other permissible eligible retirement plan) established by or for the Beneficiary for purposes of receiving the distribution.

(iii) *Distributee*. A Distributee includes an Employee or former Employee. In addition, the Employee's or former Employee's surviving spouse, and the Employee's or former Employee's spouse or former spouse who is an alternate payee under a qualified domestic relations order, as defined in Section 414(p) of the Code, are Distributees with regard to the interest of the spouse and former spouse. Moreover, a non-spousal Beneficiary who is a "designated beneficiary" under Code Section 401(a)(9)(E) and the regulations promulgated thereunder is a Distributee.

(iv) *Direct Rollover*. A direct rollover is a payment by the Plan to the eligible retirement plan specified by the Distributee.

(c) If a distribution is one to which Sections 401(a)(11) and 417 of the Code do not apply, such distribution may commence less than thirty (30) days after the notice required under Section 1.411(a)-11(c) of the Income Tax Regulations is given, provided that:

(i) the Administrator clearly informs the Participant that the Participant has a right to a period of at least thirty (30) days after receiving the notice to consider the decision of whether or not to elect a distribution (and, if applicable, a particular distribution option); and

(ii) the Participant, after receiving the notice, affirmatively elects a distribution.

(d) If a distribution is one to which Sections 401(a)(11) and 417 of the Code applies, the distribution may commence less than thirty (30) days, but not less than seven (7) days, after the notice required under Section 1.417(a)(3)-1 of the Income Tax Regulations is given, provided, that the requirements of paragraphs (c)(i) and (c)(ii) above are satisfied with respect to both the Participant and the Participant's spouse, if applicable.

**5.10 RETROACTIVE BENEFIT PAYMENTS.** In the event that the amount of a monthly benefit to any retired or terminated Participant cannot be determined for any reason (including lack of information as to whether the Participant is still living or whether he is married) on the date payment is to commence under this Article Five, payment shall be made retroactive to such date no later than sixty (60) days after the date on which the amount of such monthly benefit can be determined, and shall be adjusted in accordance with procedures established by the Plan Administrator from time to time to reflect delayed payment.

Furthermore, if the written notification described in Section 5.2(e) is furnished to a Participant on or after the Participant's annuity starting date, then (i) the Participant's election period shall not end until

30 days after such notification is provided, and (ii) distributions must commence to such a Participant not more than 180 days after (or longer if distribution has not yet occurred by such 180th day solely for administrative reasons) such notification is provided (in which case the annuity starting date affirmatively elected by the Member shall be referred to as the "Retroactive Annuity Starting Date" and shall be deemed to have occurred on the date such Participant's Plan benefits first became payable). Notwithstanding any provision of the Plan to the contrary, for purposes of the foregoing, Plan benefits shall only be provided based on a Retroactive Annuity Starting Date if all of the following conditions are satisfied:

(a) The Participant affirmatively elects to use the Retroactive Annuity Starting Date.

(b) The Participant's spouse, as of the time distributions actually commence (including an alternate payee who is treated as the Participant's spouse under a qualified domestic relations order as defined in Code section 414(p)), consents to the Retroactive Annuity Starting Date election in a manner that satisfies the spousal consent requirements set forth herein. However, such spousal consent is not required where the amount of such spouse's survivor annuity payments using the Retroactive Annuity Starting Date are no less than the amount that the survivor payments to such spouse would have been under an optional form of benefit that would satisfy the requirements to be a "qualified joint and survivor annuity" under Code section 417(b) and has an annuity starting date after the date that the notification was provided.

(c) The distribution (including appropriate interest rate adjustments) to the Participant provided based on the Retroactive Annuity Starting Date would satisfy the requirements of Code section 415, if the date the distribution commences is substituted for the annuity starting date for all purposes, including for purposes of determining the applicable interest rate and mortality table; provided, however, that such requirement is not applicable in the case of a distribution that commences 12 months or less from the Retroactive Annuity Starting Date, unless the form of benefit is a form of benefit subject to the valuation rules of Code section 417(e)(3).

(d) Future periodic payments with respect to a Participant who elects a Retroactive Annuity Starting Date are the same as the future periodic payments, if any, that would have been paid to such Participant had payments actually commenced on the Retroactive Annuity Starting Date. In addition, in the case of a form of benefit that would have been subject to Code section 417(e)(3) if distributions had commenced as of the Retroactive Annuity Starting Date, the distribution must be no less than the benefit produced by applying the applicable interest rate and the applicable mortality table determined as of the date the distribution commences to the annuity form that corresponds to the annuity form that was used to determine the benefit amount as of the Retroactive Annuity Starting Date. In the case of either future periodic payments described in the first sentence of this subsection (d) or payments subject to Code section 417(e)(3) described in the second sentence of this subsection (d), the Participant must receive a make-up amount to reflect any missed payments, with an appropriate adjustment for interest, at a rate of interest equal to the applicable interest rate for one-year Treasury-Bills plus 1%, compounded monthly, from the date the payments would have been made to the date payments actually commenced.

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## **ARTICLE SIX--DEATH BENEFITS**

**6.1 UNMARRIED PARTICIPANT.** In the case of a Participant who has no surviving spouse and dies after having completed at least three (3) years of Credited Service but prior to his annuity starting date (within the meaning of Section 5.2(d), his retirement benefit under the Cash Balance Formula, if any, shall be payable to his Beneficiary in a single lump-sum cash distribution as soon as practicable following the applicable date described in Section 6.2. In the case of the death of an unmarried Participant before his annuity starting date, no benefit shall be payable under the Career Earnings Formula.

### **6.2 MARRIED PARTICIPANT.**

(a) **Automatic Preretirement Surviving Spouse Benefit.** In the case of a Participant who has a surviving spouse to whom he was married throughout the one (1)-year period ending on the date of his death, and who dies prior to his annuity starting date (within the meaning of Section 5.2(d)), the preretirement death benefit payable to such Participant's surviving spouse shall be a single life annuity. The amount of such single life annuity under the Cash Balance Formula shall be determined based on the spouse's life and shall be the Actuarial Equivalent of the benefit that would have been payable to the Participant in the form of a lump-sum benefit determined on the date of the Participant's death. Such preretirement surviving spouse benefit shall commence at the end of the month following the month in which the Participant would have attained his Normal Retirement Date or earlier, if the spouse so elects. The amount of such single life annuity under the Career Earnings Formula shall be determined as if (i) the Participant's separation from service had occurred on the day immediately preceding his date of death (if he had not previously incurred a separation from service), (ii) the Participant had survived to the day immediately preceding his earliest possible annuity starting date, (iii) the Participant had elected to receive his retirement benefit in the form of a qualified joint and survivor annuity pursuant to Section 5.2, and (iv) the Participant died immediately following such election. Such preretirement surviving spouse benefit, payable for the life of the surviving spouse, shall commence at the end of the month following the month in which the Participant would have attained his Normal Retirement Date or earlier, if the spouse so elects. Provided, however, that if the spouse elects to receive such benefit prior to the earliest retirement age under the Plan, such benefit shall be further reduced using the applicable actuarial assumption set forth in Section 1.2 to reflect such early commencement.

Solely for purposes of this Section 6.2 and solely with respect to a Participant's Accrued Benefit in excess of the Participant's Accrued Benefit as of December 31, 2008 ("post-2008 Accrued Benefits"), a person who would otherwise be considered the Participant's spouse under the Plan, except that he or she is the same sex as the Participant, shall be treated in the same manner as a spouse for purposes of determining the preretirement death benefit payable under this Section 6.2 under the Career Earnings Formula with respect to a Participant's post-2008 Accrued Benefits. Such Participant shall be considered to be a married Participant for purposes of the last sentence of Section 6.1 with respect to such post-2008 Accrued Benefits.

(b) **Lump-Sum Option.** In lieu of an automatic preretirement surviving spouse benefit under Section 6.2(a), a surviving spouse may elect to receive a lump-sum benefit equal to the value of the Participant's Cash Balance Account as of the last day of the month in which the Participant's termination of employment or death occurs, but not less than the amount determined in accordance with the factors in Section 1.2.

(c) **Waiver of Preretirement Surviving Spouse Benefit.** With respect to a Participant's Accrued Benefit attributable to the Cash Balance Formula, a married Participant may waive the automatic preretirement surviving spouse benefit in accordance with the provisions of this Section 6.2(c).

(1) **Notice Requirements.** The Administrator shall provide each Participant with a written explanation with respect to the automatic preretirement surviving spouse benefit comparable to that required in Section 5.2(e), regarding the qualified joint and surviving annuity, within whichever of the following periods that ends last: (A) the period beginning on

the first day of the Plan Year in which the Participant attains age thirty-two (32) and ending on the last day of the Plan Year in which the Participant attains age thirty-four (34); (B) a reasonable period after an Employee becomes a Participant; or (C) a reasonable period after the joint and survivor rules become applicable to the Participant. A reasonable period described in clauses (B) and (C) is the period beginning one year before and ending one year after the applicable event. If the Participant's severance from service date is before the date the Participant attains age thirty-five (35), clauses (A), (B) and (C) shall not apply and the Administrator must provide the written explanation within the period beginning one year before and ending one year after the Participant's severance from service date.

(2) **Election Period.** A Participant's waiver of the automatic preretirement surviving spouse benefit is not valid unless (A) the Participant makes the waiver election no earlier than the first day of the Plan Year in which he attains age thirty-five (35) and (B) the Participant's spouse satisfies the consent requirements described in section 6.2(c)(3). The spouse's consent to the waiver of the automatic preretirement surviving spouse benefit shall be irrevocable, unless the Participant revokes the waiver election. Irrespective of the time of election requirements described in clause (A) of the first sentence of this Section 6.2(c)(2), if the Participant's severance from service date occurs prior to the first day of the Plan Year in which he attains age thirty-five (35), the Administrator shall accept a waiver election with respect to the Participant's benefit attributable to his service prior to his severance from service date.

Furthermore, if a Participant who has not separated from service makes a valid waiver election, except for the timing requirement of clause (A) of the first sentence of this Section 6.2(c)(2), the Administrator shall accept that election as valid, but only until the first day of the Plan Year in which the Participant attains age thirty-five (35).

(3) **Elections.** A Participant may elect to waive the automatic preretirement surviving spouse benefit or revoke such election at any time during the applicable election periods described in Section 6.2(c)(2)(A) and (B). An election shall only be given effect if (i) the spouse of the Participant consents in writing to such election, (ii) such election designates another Beneficiary or Beneficiaries to receive the death benefit in the form of a lump-sum benefit which may not be changed without written spousal consent (or the consent of the spouse expressly permits designations by the Participant without the requirements of further consent by the spouse), and (iii) the spouse's consent acknowledges the effect of such election and such consent is witnessed by a notary public. If it is established to the satisfaction of the Administrator that a Participant has no spouse, that his spouse may not be located, or that such other circumstances as the Secretary of the Treasury may prescribe by regulations have occurred, then spousal consent shall not be required. Any spousal consent or lack of requirement of such consent shall only be effective with respect to such spouse.

**6.3 AMOUNTS NOT EXCEEDING \$1,000.** Notwithstanding the foregoing provisions of this Article Six, if the Actuarial Equivalent value of a benefit payable under this Article does not exceed one-thousand dollars (\$1,000), such benefit shall be paid in a single lump-sum payment.

**6.4 DESIGNATION OF BENEFICIARY.** Each Participant shall designate a Beneficiary in a manner acceptable to the Administrator to receive payment of any death benefit payable under the Plan if such Beneficiary should survive the Participant. However, no Participant who is married shall be permitted to designate a Beneficiary other than his spouse unless the Participant's spouse has signed a written consent witnessed by a notary public which provides for the designation of an alternate Beneficiary.

Subject to the above, Beneficiary designations may include primary and contingent Beneficiaries, and may be revoked or amended at any time in similar manner or form, and the most recent designation shall govern. A designation of a Beneficiary made by a Participant shall cease to be effective upon his marriage or remarriage. In addition, a spousal Beneficiary designation shall cease to be effective upon the divorce of the Participant and such spouse. In the absence of an effective designation of Beneficiary, or if no designated Beneficiary is surviving as of the date of the Participant's death, any death benefit shall be paid to the surviving spouse of the Participant, or, if no surviving spouse, to the Participant's estate. Notification to Participants of the death benefits under the Plan and the method of designating a Beneficiary shall be given at the time and in the manner provided by regulations and rulings under the Code.

In the event a Beneficiary survives the Participant, but dies before receipt of all payments due that Beneficiary hereunder, any benefits remaining to be paid to the Beneficiary shall be paid to the Beneficiary's estate.

**6.5 HEART ACT DEATH BENEFITS UNDER USERRA.** In accordance with the provisions of the Heroes Earnings Assistance and Relief Act of 2008 ("HEART Act") and solely in the case of a Participant's death occurring on or after January 1, 2007, if a Participant dies while performing qualified military service (as defined in Code Section 414(u)), the Beneficiary(ies) (or surviving spouse, if the qualified joint and survivor annuity or qualified pre-retirement survivor annuity rules apply) of the Participant shall be entitled to any additional benefits (other than benefit accruals relating to the period of qualified military service) provided under the Plan as if the Participant had resumed employment and then terminated employment on account of death. In addition, vesting service credit for the deceased Participant's period of qualified military service shall be credited to the extent required by Code Section 401(a)(37).

The provisions of this Section 6.5 shall be interpreted consistent with, and governed by, Section 414(u)(9) of the Code and regulatory guidance issued thereunder.

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**ARTICLE SEVEN--EMPLOYER CONTRIBUTIONS**

**7.1** a r y t o a s s i s t i t i n d e t e  
amount of contributions to be made under the Plan. The contribution of the Employer may be paid to the Trustee on any date or dates which the Employer may select and shall be made in the form of cash or checks made payable to the Trustee, or in the form of property acceptable to the Trustee under the terms of the Trust.

**7.2 FORFEITURES.** No forfeiture under the Plan shall be applied to increase the benefits that any Participant or Beneficiary would otherwise receive. Any amounts forfeited shall be held in the Trust Fund and used to reduce the contributions of the Employer and/or to pay Plan expenses.

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## **ARTICLE EIGHT--ADMINISTRATION OF THE PLAN**

**8.1 RESPONSIBILITY FOR PLAN AND TRUST ADMINISTRATION.** The Plan shall be administered by a committee (the "Retirement Committee") which shall be appointed by the Board of Directors of the Company. The Retirement Committee shall be the Plan Administrator and shall be responsible for the general administration of the Plan. However, the Retirement Committee shall have no responsibility for or control over the investment of Plan assets. The investment of the assets of the Plan shall be managed by a separate committee (the "Plan Assets Committee"), which shall also be appointed by the Board of Directors of the Company, except to the extent that such responsibility has been allocated or delegated as hereinafter otherwise provided. The Retirement Committee and the Plan Assets Committee are each referred to as a "Committee" in this Article Eight. The Board of Directors of the Company shall have the sole authority to appoint and remove any member of the Committees, and to amend or terminate, in whole or in part the Plan or the Trust. The Company, through the Committees shall have the responsibility for the administration of the Plan, which is specifically described in the Plan and the related Trust. Each of the Retirement Committee and the Plan Assets Committee shall be a "named fiduciary" and the Retirement Committee shall be the "Plan Administrator," for purposes of the Code and the Employee Retirement Income Security Act of 1974, as amended.

**8.2 OPERATION OF THE COMMITTEE.** Each Committee shall consist of at least three (3) persons appointed by the Board of Directors of the Company. Members of the Committees may resign at any time upon due notice in writing. The Board of Directors of the Company may remove any member of any Committee at any time, with or without cause. Vacancies in each Committee shall be filled by the Board of Directors of the Company as soon as is reasonably possible after the vacancy occurs. Until a new appointment is made, the remaining member or members of each Committee shall have full authority to act as such Committee. Any member of a Committee may resign by delivering his written resignation to the Secretary of the Company (the "Secretary") and the other members of the Committee. Any such resignation shall become effective upon its receipt by the Secretary or on any other date as is agreed to by the chairman of the Committee and the resigning member. Each Committee shall act by a majority of its members at the time in office, and such action may be taken either by vote at a meeting (including a telephone meeting) or by consent in writing without a meeting. Each Committee shall hold meetings (including telephone meetings) upon such notice and at such times and places as it may from time to time determine. Notice of a meeting need not be given to any member of a Committee who submits a signed waiver of notice before or after the meeting or who attends a meeting (including a telephone meeting). Each Committee may adopt such rules and appoint such subcommittees as it deems desirable for the conduct of its affairs and the administration of the Plan, and may appoint one of its members as its chairman. Each Committee shall elect a secretary, who need not be a member of the Committee, who shall record the minutes of its proceedings and shall perform such other duties as may from time to time be assigned to him. Any person dealing with a Committee shall be entitled to rely upon a certificate of any member of such Committee, or its secretary, as to any act or determination of the Committee. Each Committee may delegate such duties or powers, as it deems necessary to carry out the administration of the Plan.

The Secretary (or other authorized officer of the Company) shall certify to the Trustee the names and authorized signatures of the members of each Committee and, as changes take place in membership, the names and signatures of new members. Each Committee may authorize one or more of its respective members to execute any document or documents on its behalf, in which event the applicable Committee shall notify the Trustee in writing of such action and the name or names of those so designated. The Trustee thereafter shall accept and rely conclusively upon any direction or document executed by such member or members as representing action by the Committee until such time as the Committee shall file with the Trustee a written revocation of such designation.

**8.3 POWERS AND DUTIES OF THE RETIREMENT COMMITTEE.** The Retirement Committee shall be a "named fiduciary," within the meaning of section 402(a) of ERISA, with respect to the operation and administration of the Plan and, except to the extent otherwise provided herein, shall administer the Plan in accordance with its terms and shall have all powers necessary to carry out its duties

hereunder. The Retirement Committee shall determine, in a uniform and nondiscriminatory manner, all questions concerning the administration, interpretation and application of the Plan. Any such determination by the Retirement Committee shall be conclusive and binding on all persons. In addition:

- (A) the Retirement Committee shall determine the names of Participants, surviving spouses and Beneficiaries and the amounts that are payable to them from the Trust Fund in accordance with the provisions of the Plan;
- (B) the Retirement Committee shall keep in convenient form such data as shall be necessary for actuarial valuations of the contingent assets and liabilities of the Plan and for checking the experience thereof;
- (C) the Retirement Committee shall determine the manner in which the funds of the Plan shall be dispensed including the form of voucher or waiver to be used in making disbursements and the due notification of persons authorized to approve and sign the same.

(D) the Retirement Committee shall determine whether a judgment, decree or order, including approval of a property settlement agreement, made pursuant to a state domestic relations law, including a community property law, that relates to the provision of child support, alimony payments, or marital property rights of a spouse, former spouse, child, or other dependent of the Participant is a qualified domestic relations order within the meaning of Code section 414(p), and shall give the required notices and segregate any amounts that may be subject to such order if it is a qualified domestic relations order, and shall administer the distributions required by any such qualified domestic relations order; and

(E) the Retirement Committee is authorized to make such rules and regulations as may be necessary to carry out the provisions of the Plan and shall determine any questions arising in the administration, interpretation and application of the Plan, which determination shall be conclusive and binding on all parties. The Retirement Committee is also authorized to provide, on a nondiscriminatory basis, for accelerated vesting and to purchase or arrange for payment of an appropriate annuity or any other form of payment or to permit the immediate distribution of Plan benefits in those cases involving groups of Employees involuntarily terminated, including, but not limited to, cases involving groups of Employees who involuntarily cease to render Credited Service due to a liquidation, sale, or other means of terminating the parent-subsiary or controlled group relationship with an Employer or the sale or other transfer to a third party of all or substantially all of the assets used by an Employer in a trade or business conducted by an Employer, when the Retirement Committee determines that such action is appropriate to prevent inequities with respect to such Employees, and the determination of the Committee in such matters shall be conclusive and binding on all parties. Further, the Retirement Committee, upon the written request of the Company's Vice President-Organization and Human Resources, is authorized, with respect to a Participant of the Plan who has three (3) or more years of Credited Service and who is transferred to the purchaser of a portion of the Company's operations, effective the day after the closing date of the sale, to grant additional Credited Service and additional credit for age under the Plan, on a nondiscriminatory basis, in each case up to one percent for each year of Credited Service, and to advance the date through which a Participant's Earnings are calculated hereof, so as to prevent hardship with respect to his participation in said purchaser's pension plan. The Retirement Committee is also authorized, with respect to a Participant (i) whose Accrued Benefit is attributable to the Cash Balance Formula and (ii) who has completed at least three (3) years of Credited Service and (iii) who is transferred to the purchaser of a portion of the Company's operations, effective as of the day after the closing date of the sale, to grant additional Annual Pay Credits and Interest Credits, on a nondiscriminatory basis, so as to prevent hardship with respect to his participation in said purchaser's pension plan. The Retirement Committee is also authorized to waive, either in whole or in part, the percentage reductions for early commencement of retirement benefits set forth herein, on a nondiscriminatory basis, in those cases where groups of Employees have terminated employment either as a result of a reduction in the work force or for similar economic reasons, and, the determination of the Retirement Committee shall be conclusive and binding on all parties. The Retirement Committee is also authorized to adopt such rules and regulations as it may consider necessary or desirable for the conduct of its affairs and the transaction of its business, including, but not limited to, the power on the part of the Retirement Committee to act without formally convening and to provide that action of the Retirement Committee may be expressed by written instrument signed by a majority of its members. The Retirement Committee may retain legal counsel (who may be counsel for the Company) when and if it is found necessary to do so

and may also employ such other assistants, clerical or otherwise, as may be requisite, and expend such monies as may be requisite in their work. All of these expenses of the Retirement Committee and the reasonable expenses of the Trustee in the administration of the trust as well as for actuarial services may be paid out of the Trust Fund to the extent permissible under applicable law. In exercising such powers and authorities, the Retirement Committee shall at all times exercise good faith, apply standards of uniform application and refrain from arbitrary action.

#### **8.4 DUTIES OF THE PLAN ASSETS COMMITTEE**

(a) The Plan Assets Committee shall have exclusive authority and fiduciary responsibility under the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), (i) to appoint and remove investment advisers, if any, under the Plan and the Trust, (ii) to direct the segregation of assets of the Trust Fund into an investment adviser account or accounts at any time, and from time to time to add to or withdraw assets from such investment adviser account or accounts as it deems desirable or appropriate and also to direct the Employer's contribution or any portion thereof into any of the accounts maintained under the Trust, (iii) to direct the Trustee to enter into an agreement or agreements with an insurance company or companies designated by the Plan Assets Committee as provided in the Trust, (iv) to establish investment guidelines for areas other than those set forth above and, within such guidelines, to direct the Trustee to purchase and sell securities or to enter into one or more agreements with one or more companies, partnerships or joint ventures and to transfer assets of the Trust Fund to such entities for purposes of investment therein; provided however, that, except as expressly set forth above, the Plan Assets Committee shall have no responsibility for or control over the investment of the Plan assets held in the Trust Fund established hereunder. In addition, the Plan Assets Committee shall receive the reports and recommendations of the Actuary designated by the Company concerning actuarial assumptions to be adopted on subjects including, but not limited to, Employee turnover, rate of mortality, disability rate, ages at actual retirement, rate of pay increases, investment income and size of participant group, and make such recommendations and determinations based upon such reports and recommendations as it may deem necessary or appropriate. The Plan Assets Committee may appoint or employ such persons as it deems necessary to render advice with respect to any responsibility of the Plan Assets Committee under the Plan. The Plan Assets Committee may allocate to any one or more of its members any responsibility that it may have under the Plan and may designate any other person or persons to carry out any responsibility of the Plan Assets Committee under the Plan. Any person may serve in more than one fiduciary capacity with respect to the Plan. Members of the Plan Assets Committee may resign at any time upon due notice in writing. The Board of Directors of the Company may remove any Plan Assets Committee members and appoint others in their places. The Plan Assets Committee may act by a majority of its members.

(b) The Plan Assets Committee is authorized to make such rules and regulations as may be necessary to carry out its duties under the Plan. The Plan Assets Committee is also authorized to adopt such rules and regulations as it may consider necessary or desirable for the conduct of its affairs and the transaction of its business, including, but not limited to, the power on the part of the Plan Assets Committee to act without formally convening and to provide that action of the Plan Assets Committee may be expressed by written instrument signed by a majority of its members. The Plan Assets Committee may retain legal counsel (who may be counsel for the Company) when and if it be found necessary to do so and may also employ such other assistants, clerical or otherwise, as may be requisite, and expend such monies as may be requisite in their work. All of these expenses of the Plan Assets Committee as well as expenses for investment counseling may be paid out of the Trust Fund to the extent permissible under applicable law.

**8.5 STANDARD OF DUTY.** The members of the Retirement Committee and the Plan Assets Committee, as well as the Trustee, shall discharge their duties with respect to the Plan solely in the interests of the Participants and their Beneficiaries and in accordance with section 404 of ERISA (as defined under Section 8.4).

**8.6 FUNDING AND INVESTMENT POLICY.** T I  
policy and funding policy consistent with the objectives of the Plan and the requirements of Title I of ERISA (as defined under Section 8.4). The Plan Assets Committee shall at least annually review such policy and method. In establishing and reviewing such policy and method, the Plan Assets

Committee shall endeavor to determine the Plan's short-term and long-term financial needs, taking into account the need for liquidity to pay benefits and the need for investment growth. The general objective of the funding policy and method shall be at all times to maintain a balance between safety in capital investment and investment return. All actions of the Plan Assets Committee taken to carry out the purposes of this Section 8.6, and the reasons therefor shall be recorded in the minutes of the Plan Assets Committee and shall be made available to the Company's Board of Directors and senior financial officers of the Company. Notwithstanding anything herein to the contrary, the Retirement Committee or the Plan Assets Committee may provide for the funding of the payment of any benefits prescribed by the Plan through the purchase of immediate or deferred annuities, as the case may be, from any governmental agency or insurance company or companies, approved by the Company.

**8.7 COMPENSATION AND EXPENSES.** The members of the Retirement Committee and the Plan Assets Committee shall serve without compensation for services as such. All expenses of the Retirement Committee and the Plan Assets Committee that are properly allocable to the Plan shall be paid out of the Trust Fund, to the extent permissible under applicable law, unless paid by the Employer. Such expenses shall include any expenses incidental to the functioning of the Retirement Committee and the Plan Assets Committee, including, but not limited to, fees of independent accountants, enrolled actuaries, legal counsel, investment advisors and other specialists and other expenses

**8.8 NON-LIABILITY AND INDEMNIFICATION.** To the extent permitted by law, the Retirement Committee, the Plan Assets Committee, the Company's Boards of Directors of the Employer, and their respective officers shall not be liable for the directions, actions or omissions of any agent, legal or other counsel, accountant or any other expert who has agreed to the performance of administrative duties in connection with the Plan or Trust. The Committees, the Boards of Directors of the Employer, and their officers shall be entitled to rely upon all certificates, reports, data, statistics, analyses and opinions which may be made by such experts and shall be fully protected in respect to any action taken or suffered by them in good faith reliance upon any such certificates, reports, data, statistics, analyses or opinions; all action so taken or suffered shall be conclusive upon each of them and upon all persons having or claiming to have any interest in or under the Plan.

Each member of each of the Retirement Committee, the Plan Assets Committee, and the Company's Board of Directors, shall be indemnified by the Company against all costs and expenses (including counsel fees but excluding any amount representing a settlement unless such settlement be approved by the Board of Directors of the Company) reasonably incurred by or imposed upon him, in connection with or resulting from any action, suit or proceeding, to which he may be made a party by reason of his being or having been a member of the Retirement Committee or the Plan Assets Committee, as applicable (whether or not he continues to be a member of such Committee at the time when such cost or expense is incurred or imposed), to the full extent permitted by law. The foregoing rights of indemnification shall not be exclusive of other rights to which any member of the Retirement Committee or the Plan Assets Committee may be entitled as a matter of law.

**8.9 CLAIMS PROCEDURE.** Pursuant to procedures established by the Administrator, claims for benefits under the Plan made by a Participant or Beneficiary (the "claimant") must be submitted in writing to the Administrator. Approved claims shall be processed and instructions issued to the Trustee or custodian authorizing payment as claimed.

If a claim is denied in whole or in part, the Administrator shall notify the claimant within ninety (90) days after receipt of the claim (or within one hundred eighty (180) days, if special circumstances require an extension of time for processing the claim, and provided written notice indicating the special circumstances and the date by which a final decision is expected to be rendered is given to the claimant within the initial ninety (90) day period).

The notice of the denial of the claim shall be written in a manner calculated to be understood by the claimant and shall set forth the following:

- (i) the specific reason or reasons for the denial of the claim;



- (ii) the specific references to the pertinent Plan provisions on which the denial is based;
- (iii) a description of any additional material or information necessary to perfect the claim, and an explanation of why such material or information is necessary;
- (iv) a statement that any appeal of the denial must be made by giving to the Administrator, within sixty (60) days after receipt of the denial of the claim, written notice of such appeal, such notice to include a full description of the pertinent issues and basis of the claim; and
- (v) a statement about the claimant's right to bring civil action under Section 502(a) under ERISA if the claim is denied on review.

Upon denial of a claim in whole or part, the claimant (or his duly authorized representative) shall have the right to submit a written request to the Administrator for a full and fair review of the denied claim, to be permitted to review documents (free of charge) pertinent to the denial, and to submit issues and comments in writing. Any appeal of the denial must be given to the Administrator within the period of time prescribed under (a)(iv) above. If the claimant (or his duly authorized representative) fails to appeal the denial to the Administrator within the prescribed time, the Administrator's adverse determination shall be final, binding and conclusive.

The Administrator may hold a hearing or otherwise ascertain such facts as it deems necessary and shall render a decision which shall be binding upon both parties. The Administrator shall advise the claimant of the results of the review within sixty (60) days after receipt of the written request for the review, unless special circumstances require an extension of time for processing, in which case a decision shall be rendered as soon as possible but not later than one hundred twenty (120) days after receipt of the request for review. If such extension of time is required, written notice of the extension shall be furnished to the claimant prior to the commencement of the extension. The decision of the review shall be written in a manner calculated to be understood by the claimant and shall include specific reasons for the decision, specific references to the pertinent Plan provisions on which the decision is based, the claimant's right to receive free of charge upon written request, reasonable access to and copies of, all Plan documents, records, and other information relevant to the claim, and a statement about the claimant's right to bring a civil action under Section 502(a) of ERISA. The decision of the Administrator shall be final, binding and conclusive.

**8.10 TRUST AGREEMENT.** The Board of Directors of the Company shall have the authority to appoint or remove the Trustee of the Trust with respect to the Plan. The Trustee shall have the authority necessary to carry out its duties under this Plan. The Trust Agreement entered into by and between the Employer and the Trustee, including any supplements or amendments thereto, or any successor Trust Agreement, is incorporated by reference herein.

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## **ARTICLE NINE--EARLY TERMINATION RESTRICTIONS/BENEFIT LIMITATIONS**

### **9.1 BENEFIT RESTRICTIONS.**

- (a) Restriction of Benefits upon Plan Termination. Notwithstanding any other provision of the Plan to the contrary, in the event the Plan is terminated, the benefit of any Highly-Compensated Employee shall be limited to a benefit that is nondiscriminatory under Code Section 401(a)(4).
- (b) Restrictions on Distributions. Notwithstanding any other provision of the Plan to the contrary, in any Plan Year, the payment of benefits to or on behalf of a Restricted Employee shall not exceed an amount equal to the payments that would be made to or on behalf of the Restricted Employee in that Plan Year under a single life annuity that is the Actuarial Equivalent of the sum of the Participant's Accrued Benefit and the Participant's other benefits, if any, under the Plan; provided, however, that this limitation shall not apply in any Plan Year in which any one of the following requirements is satisfied:
- (1) After taking into account payment to or on behalf of the Restricted Employee of all benefits payable to or on behalf of that Restricted Employee under the Plan, the value of Plan assets must equal or exceed 110 percent of the value of current liabilities (determined in accordance with the Code and regulatory guidance).
  - (2) The value of the benefits payable to or on behalf of the Restricted Employee must be less than one percent of the value of current liabilities (determined in accordance with the Code and regulatory guidance) before distribution.
  - (3) The value of the benefits payable to or on behalf of the Restricted Employee must not exceed the amount described in Code Section 411(a)(11)(A).
- (c) "Restricted Employee" Defined. For purposes of this Section 9.1, the term "Restricted Employee" means any of the twenty-five (25) highest paid Highly Compensated Employees.

### **9.2 LIMITATION ON BENEFITS.**

- (a) Rules: Except as otherwise provided herein, the provisions of this Section 9.2 shall apply with respect to annuity starting dates (as defined in Section 5.2(d)) commencing on or after the first day of the limitation year or Plan Year beginning on or after July 1, 2007. The following rules shall limit benefits payable under the Plan:
- (1) The annual benefit otherwise payable to a Participant at any time shall not exceed the maximum permissible amount (as hereinafter defined). No Participant may accrue a benefit in excess of that amount.
  - (2) If the Participant makes nondeductible Employee contributions under the terms of the Plan, such contributions, which are credited for the limitation year, shall, except for purposes of subsection (3) below, be treated as an annual addition to a qualified defined contribution plan for purposes of these rules.
  - (3) The limitation in subsection (1) shall be deemed satisfied if the annual benefit payable to a Participant is not more than \$1,000 multiplied by the Participant's number of years of participation or portions thereof (not to exceed ten (10)) with the Employer, provided the Participant has never participated in a qualified defined contribution plan maintained by the Employer.
  - (4) If a Participant is, or has ever been, covered under more than one defined benefit plan maintained by the Employer, the sum of the Participant's annual benefits from all such plans may not exceed the maximum permissible amount. Benefits shall be reduced under any other defined benefit plan before under this Plan unless such other plan(s) is terminated, in which event liabilities shall be limited in this Plan.
- (b) Definitions: The following definitions are applicable to this Section:

(1) Annual benefit: A retirement benefit under the Plan which is payable annually in the form of a straight life annuity. A benefit payable in a form other than a straight life annuity shall be adjusted pursuant to the rules of Section 1.415(b)-1(c) of the Income Tax Regulations before applying the limitations of this Section.

(2) Compensation: For purposes of determining maximum permitted benefits under this Section, all of a Participant's earned income, wages, salaries, fees for professional services, and other amounts received (without regard to whether or not an amount is paid in cash) for personal services actually rendered in the course of employment with the Employer maintaining the Plan, to the extent that the amounts are includible in gross income (or to the extent amounts would have been received and includible in gross income but for an election under Code Sections 125(a), 132(f)(4), 402(e)(3), 402(h)(1)(B), 402(k) or 457(b)), including, but not limited to, commissions paid to salespersons, compensation for services on the basis of a percentage of profits, commissions on insurance premiums, tips, bonuses, fringe benefits, reimbursements or other expense allowances under a nonaccountable plan (as described in Section 1.62-2(c) of the Income Tax Regulations), and excluding the following:

(A) Contributions (other than elective contributions described in Code Section 402(e)(3), 408(k)(6), 408(p)(2)(A)(i), or 457(b)), made by the Employer to a plan of deferred compensation (including a simplified employee pension described in Code Section 408(k) or a simple retirement account described in Code Section 408(p), and whether or not qualified) which are not included in the Employee's gross income for the taxable year in which contributed, and any distributions from a plan of deferred compensation (whether or not qualified).

(B) Amounts realized from the exercise of a nonstatutory stock option, or when restricted stock (or other property) held by the Employee either becomes freely transferable or is no longer subject to a substantial risk of forfeiture;

(C) Amounts realized from the sale, exchange or other disposition of stock acquired under a statutory stock option;

(D) Other amounts that receive special tax benefits, such as premiums for group-term life insurance (but only to the extent that the premiums are not includible in the gross income of the Participant and are not salary reduction amounts that are described in Code Section 125);

(E) Other items of remuneration that are similar to any of the items listed in A, B, C or D; and

(F) Amounts in excess of the limitation under Code Section 401(a)(17) in effect for the calendar year in which the limitation year begins.

Compensation shall be measured on the basis of compensation paid in the limitation year and shall include Compensation paid by the later of two and one-half (2½) months after a Participant's severance from employment with the Employer maintaining the Plan or the end of the limitation year that includes the date of the Participant's severance from employment with the Employer maintaining the Plan, if the payment is regular Compensation for services during the Participant's regular working hours, or Compensation for services outside the Participant's regular working hours (such as overtime or shift differential), commissions, bonuses, or other similar payments, and, absent a severance from employment, the payments would have been paid to the Participant while the Participant continued in employment with the Employer. Any payments not described above shall not be considered Compensation if paid after severance from employment, even if they are paid by the later of two and one-half (2½) months after the date of severance from employment or the end of the limitation year that includes the date of severance from employment, except, payments to an individual who does not currently perform services for the Employer by reason of qualified military service (within the meaning of Code Section 414(u)(1)) to the extent these payments do not exceed the amounts the individual would have received if the individual had continued to perform services for the Employer rather than entering qualified military service.

For years beginning after December 31, 2008, Compensation shall also include differential wage payments as defined by Code Section 3401(h)(2).

(3) Defined Benefit Dollar Limitation: The "defined benefit dollar limitation" is \$195,000 as adjusted, effective January 1 of each year, under Section 415(d) of the Code in such manner as the Secretary shall prescribe, and payable in the form of a straight life annuity. A limitation as adjusted under Code Section 415(d) shall apply to limitation years ending with or within the calendar year for which the adjustment applies.

(4) Employer: This term refers to the Employer that adopts the Plan, and all Participants of a controlled group of corporations (as defined in Section 414(b) of the Code, as modified by Code Section 415(h)), commonly-controlled trades or businesses (as defined in Code Section 414(c) as modified by Code Section 415(h)), or affiliated service groups (as defined in Code Section 414(m)) of which the Employer is a part, or any other entity required to be aggregated with the Employer under Code Section 414(o).

(5) Highest Average Compensation: This means the average Compensation for the three (3) consecutive limitation years with the Employer that produces the highest average.

(6) Limitation year: This shall mean the calendar year.

(7) Maximum permissible amount: The "maximum permissible amount" is the lesser of the defined benefit dollar limitation or one hundred percent (100%) of the Participant's Highest Average Compensation (the "defined benefit compensation limitation") (both adjusted where required, as provided in (A) and, if applicable, in (B) or (C) below).

(A) If the Participant has fewer than 10 years of participation in the Plan, the defined benefit dollar limitation shall be multiplied by a fraction, (i) the numerator of which is the number of years (or part thereof) of participation in the Plan and (ii) the denominator of which is 10. In the case of a Participant who has fewer than 10 years of service with the Employer, the defined benefit compensation limitation shall be multiplied by a fraction, (i) the numerator of which is the number of years (or part thereof) of service with the Employer and (ii) the denominator of which is 10.

(B) If the benefit of a Participant begins prior to age 62, the defined benefit dollar limitation shall be adjusted in accordance with the rules set forth in Section 1.415(b)-1(d) of the Income Tax Regulations, including the use of the applicable mortality table (within the meaning of Section 417(e)(3) of the Code).

(C) If the benefit of a Participant begins after the Participant attains age 65, the defined benefit dollar limitation shall be adjusted in accordance with the rules set forth in Section 1.415(b)-1(e) of the Income Tax Regulations, including the use of the applicable mortality table (within the meaning of Section 417(e)(3) of the Code).

Notwithstanding the foregoing, a benefit that is payable in a form other than a straight life annuity and that is subject to Section 417(e)(3) of the Code shall be adjusted to an actuarial straight life annuity that is equal to:

(i) **Annuity Starting Date in Plan Years Beginning After 2005.** If the annuity starting date of the Participant's form of benefit is in a Plan Year beginning after 2005, the actuarially equivalent straight life annuity is equal to the greatest of (I) the annual amount of straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit, computed using the interest rate specified in the Plan and the mortality table (or other tabular factor) specified in the Plan for adjusting benefits in the same form; (II) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit, computed using a 5.5 percent interest rate assumption and the applicable mortality table under Section 417(e)(3) of the Code and (III) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit, computed using the applicable interest rate under Regulation Section 1.417(e)-1(d)(3) and the applicable mortality table under Section 417(e)(3) of the Code, divided by 1.05. Notwithstanding the foregoing, in the case of a plan maintained by an eligible employer (as

defined in Section 408(p)(2)(C)(i) of the Code), clause (III) of the preceding sentence shall not apply.

(ii) **Annuity Starting Date in Plan Years Beginning 2004 or 2005**. If the annuity starting date of the Participant's form of benefit is in a Plan Year beginning 2004 or 2005, the actuarially equivalent straight life annuity is equal to the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the Participant's form of benefit, computed using whichever of the following produces the greater annual amount: (I) the interest rate specified in the Plan and the mortality table (or other tabular factor) specified in the Plan for adjusting benefits in the same form; and (II) a 5.5 percent interest rate assumption and the applicable mortality table under Regulation Section 1.417(e)-1(d)(2).

### **9.3 LIMITATIONS APPLICABLE BASED ON FUNDING OR BANKRUPTCY**

1. Limitations Applicable If the Plan's Adjusted Funding Target Attainment Percentage Is Less Than Notwithstanding any other provisions of the Plan, if the Plan's adjusted funding target attainment percentage for a Plan Year is less than 80 percent (or would be less than 80 percent to the extent described in Subsection 1(b) below) but is not less than 60 percent, then the limitations set forth in this Subsection 1 apply.

(a) 50 Percent Limitation on Single Sum Payments, Other Accelerated Forms of Distribution, and Other Prohibited Payments. A Participant or Beneficiary is not permitted to elect, and the Plan shall not pay, a single sum payment or other optional form of benefit that includes a prohibited payment with an annuity starting date on or after the applicable Section 436 measurement date, and the Plan shall not make any payment for the purchase of an irrevocable commitment from an insurer to pay benefits or any other payment or transfer that is a prohibited payment, unless the present value of the portion of the benefit that is being paid in a prohibited payment does not exceed the lesser of:

- (i) 50 percent of the present value of the benefit payable in the optional form of benefit that includes the prohibited payment; or
- (ii) 100 percent of the PBGC maximum benefit guarantee amount (as defined in § 1.436-1(d)(3)(iii)(C) of the Treasury Regulations).

The limitation set forth in this Subsection 1(a) does not apply to any payment of a benefit which under § 411(a)(11) of the Internal Revenue Code may be immediately distributed without the consent of the Participant. If an optional form of benefit that is otherwise available under the terms of the Plan is not available to a Participant or Beneficiary as of the annuity starting date because of the application of the requirements of this Subsection 1(a), the Participant or Beneficiary is permitted to elect to bifurcate the benefit into unrestricted and restricted portions (as described in § 1.436-1(d)(3)(iii)(D) of the Treasury Regulations). The Participant or Beneficiary may also elect any other optional form of benefit otherwise available under the Plan at that annuity starting date that would satisfy the 50 percent/PBGC maximum benefit guarantee amount limitation described in this Subsection 1(a), or may elect to defer the benefit in accordance with any general right to defer commencement of benefits under the Plan.

(b) Plan Amendments Increasing Liability for Benefits. No amendment to the Plan that has the effect of increasing liabilities of the Plan by reason of increases in benefits, establishment of new benefits, changing the rate of benefit accrual, or changing the rate at which benefits become nonforfeitable shall take effect in a Plan Year if the adjusted funding target attainment percentage for the Plan Year is:

- (i) Less than 80 percent; or
- (ii) 80 percent or more, but would be less than 80 percent if the benefits attributable to the amendment were taken into account in determining the adjusted funding target attainment percentage.

The limitation set forth in this Subsection 1(b) does not apply to any amendment to the Plan that provides a benefit increase under a Plan formula that is not based on compensation, provided that the rate of such increase does not exceed the contemporaneous rate of increase in the average wages of Participants covered by the amendment.

2. Limitations Applicable If the Plan's Adjusted Funding Target Attainment Percentage Is Less Than 60 Percent. Notwithstanding any other provisions of the Plan, if the Plan's adjusted funding target attainment percentage for a Plan Year is less than 60 percent (or would be less than 60 percent to the extent described in Subsection 2(b) below), then the limitations in this Subsection 2 apply.

(a) Single Sums, Other Accelerated Forms of Distribution, and Other Prohibited Payments Not Permitted. A Participant or Beneficiary is not permitted to elect, and the Plan shall not pay, a single sum payment or other optional form of benefit that includes a prohibited payment with an annuity starting date on or after the applicable Section 436 measurement date, and the Plan shall not make any payment for the purchase of an irrevocable commitment from an insurer to pay benefits or any other payment or transfer that is a prohibited payment. The limitation set forth in this Subsection 2(a) does not apply to any payment of a benefit which under § 411(a)(11) of the Internal Revenue Code may be immediately distributed without the consent of the Participant.

(b) Shutdown Benefits and Other Unpredictable Contingent Event Benefits Not Permitted to Be Paid. An unpredictable contingent event benefit with respect to an unpredictable contingent event occurring during a Plan Year shall not be paid if the adjusted funding target attainment percentage for the Plan Year is:

(i) Less than 60 percent; or

(ii) 60 percent or more, but would be less than 60 percent if the adjusted funding target attainment percentage were redetermined applying an actuarial assumption that the likelihood of occurrence of the unpredictable contingent event during the Plan Year is 100 percent.

(c) Benefit Accruals Frozen. Benefit accruals under the Plan shall cease as of the applicable Section 436 measurement date. In addition, if the Plan is required to cease benefit accruals under this Subsection 2(c), then the Plan is not permitted to be amended in a manner that would increase the liabilities of the Plan by reason of an increase in benefits or establishment of new benefits.

3. Limitations Applicable If the Plan Sponsor Is In Bankruptcy. Notwithstanding any other provisions of the Plan, a Participant or Beneficiary is not permitted to elect, and the Plan shall not pay, a single sum payment or other optional form of benefit that includes a prohibited payment with an annuity starting date that occurs during any period in which the Plan sponsor is a debtor in a case under title 11, United States Code, or similar Federal or State law, except for payments made within a Plan Year with an annuity starting date that occurs on or after the date on which the Plan's enrolled actuary certifies that the Plan's adjusted funding target attainment percentage for that Plan Year is not less than 100 percent. In addition, during such period in which the Plan sponsor is a debtor, the Plan shall not make any payment for the purchase of an irrevocable commitment from an insurer to pay benefits or any other payment or transfer that is a prohibited payment, except for payments that occur on a date within a Plan Year that is on or after the date on which the Plan's enrolled actuary certifies that the Plan's adjusted funding target attainment percentage for that Plan Year is not less than 100 percent. The limitation set forth in this Subsection 3 does not apply to any payment of a benefit which under § 411(a)(11) of the Internal Revenue Code may be immediately distributed without the consent of the Participant.

4. Provisions Applicable After Limitations Cease to Apply.

(a) Resumption of Prohibited Payments. If a limitation on prohibited payments under Subsection 1(a), Subsection 2(a), or Subsection 3 applied to the Plan as of a Section 436 measurement date, but that limit no longer applies to the Plan as of a later Section 436 measurement date, then that limitation does not apply to benefits with annuity starting dates that are on or after that later Section 436 measurement date.

(b) Resumption of Benefit Accruals. If a limitation on benefit accruals under Subsection 2(c) applied to the Plan as of a Section 436 measurement date, but that limitation no longer applies to the Plan as of a later Section 436 measurement date, then benefit accruals shall resume prospectively and that limitation does not apply to benefit accruals that are based on service on or after that later Section 436 measurement date, except as otherwise provided under the Plan. The Plan shall comply with the rules relating to partial years of participation and the prohibition on double proration under Department of Labor regulation 29 CFR § 2530.204-2(c) and (d).

(c) Shutdown and Other Unpredictable Contingent Event Benefits. If an unpredictable contingent event benefit with respect to an unpredictable contingent event that occurs during the Plan Year is not permitted to be paid after the occurrence of the event because of the limitation of Subsection 2(b), but is permitted to be paid later in the same Plan Year (as a result of additional contributions or pursuant to the enrolled actuary's certification of the adjusted funding target attainment percentage for the Plan Year that meets the requirements of § 1.436-1(g)(5)(ii)(B) of the Treasury Regulations), then that unpredictable contingent event benefit shall be paid, retroactive to the period that benefit would have been payable under the terms of the Plan (determined without regard to Subsection 2(b)). If the unpredictable contingent event benefit does not become payable during the Plan Year in accordance with the preceding sentence, then the Plan is treated as if it does not provide for that benefit.

(d) Treatment of Plan Amendments That Do Not Take Effect. If a Plan amendment does not take effect as of the effective date of the amendment because of the limitation of Subsection 1(b) or Subsection 2(c), but is permitted to take effect later in the same Plan Year (as a result of additional contributions or pursuant to the enrolled actuary's certification of the adjusted funding target attainment percentage for the Plan Year that meets the requirements of § 1.436-1(g)(5)(ii)(C) of the Treasury Regulations), then the Plan amendment must automatically take effect as of the first day of the Plan Year (or, if later, the original effective date of the amendment). If the Plan amendment cannot take effect during the same Plan Year, then it shall be treated as if it were never adopted, unless the Plan amendment provides otherwise.

5. Notice Requirement. See Section 101(j) of ERISA for rules requiring the Plan administrator of a single employer defined benefit pension Plan to provide a written notice to Participants and Beneficiaries within 30 days after certain specified dates if the Plan has become subject to a limitation described in Subsection 1(a), Subsection 2, or Subsection 3.

6. Methods to Avoid or Terminate Benefit Limitations. See § 436(b)(2), (c)(2), (e)(2), and (f) of the Internal Revenue Code and § 1.436-1(f) of the Treasury Regulations for rules relating to employer contributions and other methods to avoid or terminate the application of the limitations set forth in Subsections 1 through 3 for a Plan Year. In general, the methods a Plan sponsor may use to avoid or terminate one or more of the benefit limitations under Subsections 1 through 3 for a Plan Year include employer contributions and elections to increase the amount of Plan assets which are taken into account in determining the adjusted funding target attainment percentage, making an employer contribution that is specifically designated as a current year contribution that is made to avoid or terminate application of certain of the benefit limitations, or providing security to the Plan.

7. Special Rules.

(a) R u l e s o f O p e r a t i o n  
for Periods Prior to and After Certification of Plan's Adjusted Funding Target Attainment Pe

(i) In General. Section 436(h) of the Internal Revenue Code and § 1.436-1(h) of the Treasury Regulations set forth a series of presumptions that apply (1) before the Plan's enrolled actuary issues a certification of the Plan's adjusted funding target attainment percentage for the Plan Year and (2) if the Plan's enrolled actuary does not issue a certification of the Plan's adjusted funding target attainment percentage for the Plan Year before the first day of the 10<sup>th</sup> month of the plan year (or if the Plan's enrolled actuary issues a range certification for the Plan Year pursuant to § 1.436-1(h)(4)(ii) of

the Treasury Regulations but does not issue a certification of the specific adjusted funding target attainment percentage for the Plan by the last day of the Plan Year). For any period during which a presumption under § 436(h) of the Internal Revenue Code and § 1.436-1(h) of the Treasury Regulations applies to the Plan, the limitations under Subsections 1 through 3 are applied to the Plan as if the adjusted funding target attainment percentage for the Plan Year were the presumed adjusted funding target attainment percentage determined under the rules of § 436(h) of the Internal Revenue Code and § 1.436-1(h)(1), (2), or (3) of the Treasury Regulations. These presumptions are set forth in Subsection 7(a)(ii) through (iv).

(ii) Presumption of Continued Underfunding Beginning First Day of Plan Year. If a limitation under Subsection 1, 2, or 3 applied to the Plan on the last day of the preceding Plan Year, then, commencing on the first day of the current Plan Year and continuing until the Plan's enrolled actuary issues a certification of the adjusted funding target attainment percentage for the Plan for the current Plan Year, or, if earlier, the date Subsection 7(a)(iii) or Subsection 7(a)(iv) applies to the Plan:

(1) The adjusted funding target attainment percentage of the Plan for the current Plan Year is presumed to be the adjusted funding target attainment percentage in effect on the last day of the preceding Plan Year; and

(2) The first day of the current Plan Year is a Section 436 measurement date.

(iii) Presumption of Underfunding Beginning First Day of 4th Month. If the Plan's enrolled actuary has not issued a certification of the adjusted funding target attainment percentage for the Plan Year before the first day of the 4th month of the Plan Year and the Plan's adjusted funding target attainment percentage for the preceding Plan Year was either at least 60 percent but less than 70 percent or at least 80 percent but less than 90 percent, or is described in § 1.436-1(h)(2)(ii) of the Treasury Regulations, then, commencing on the first day of the 4th month of the current Plan Year and continuing until the Plan's enrolled actuary issues a certification of the adjusted funding target attainment percentage for the Plan for the current Plan Year, or, if earlier, the date Subsection 7(a)(iv) applies to the Plan:

(1) The adjusted funding target attainment percentage of the Plan for the current Plan Year is presumed to be the Plan's adjusted funding target attainment percentage for the preceding Plan Year reduced by 10 percentage points; and

(2) The first day of the 4th month of the current Plan Year is a Section 436 measurement date.

(iv) Presumption of Underfunding On and After First Day of 10th Month. If the Plan's enrolled actuary has not issued a certification of the adjusted funding target attainment percentage for the Plan Year before the first day of the 10th month of the Plan Year (or if the Plan's enrolled actuary has issued a range certification for the Plan Year pursuant to § 1.436-1(h)(4)(ii) of the Treasury Regulations but has not issued a certification of the specific adjusted funding target attainment percentage for the Plan by the last day of the Plan Year), then, commencing on the first day of the 10th month of the current Plan Year and continuing through the end of the Plan Year:

(1) The adjusted funding target attainment percentage of the Plan for the current Plan Year is presumed to be less than 60 percent; and

(2) The first day of the 10th month of the current Plan Year is a Section 436 measurement date.

(b) New Plans, Plan Termination, Certain Frozen Plans, and Other Special Rules.

(i) First 5 Plan Years. The limitations in Subsection 1(b), Subsection 2(b), and Subsection 2(c) do not apply to a new plan for the first 5 plan years of the plan, determined under the rules of § 436(i) of the Internal Revenue Code and § 1.436-1(a)(3)(i) of the Treasury Regulations.



(ii) Plan Termination. The limitations on prohibited payments in Subsection 1(a), Subsection 2(a), and Subsection 3 do not apply to prohibited payments that are made to carry out the termination of the Plan in accordance with applicable law. Any other limitations under this section of the Plan do not cease to apply as a result of termination of the Plan.

(iii) Exception to Limitations on Prohibited Payments Under Certain Frozen Plans. The limitations on prohibited payments set forth in Subsections 1(a), 2(a), and 3 do not apply for a Plan Year if the terms of the Plan, as in effect for the period beginning on September 1, 2005, and continuing through the end of the Plan Year, provide for no benefit accruals with respect to any Participants. This Subsection 7(b)(iii) shall cease to apply as of the date any benefits accrue under the Plan or the date on which a Plan amendment that increases benefits takes effect.

(iv) Special Rules Relating to Unpredictable Contingent Event Benefits and Plan Amendments Increasing Benefit Liability. During any period in which none of the presumptions under Subsection 7(a) apply to the Plan and the Plan's enrolled actuary has not yet issued a certification of the Plan's adjusted funding target attainment percentage for the Plan Year, the limitations under Subsection 1(b) and Subsection 2(b) shall be based on the inclusive presumed adjusted funding target attainment percentage for the Plan, calculated in accordance with the rules of § 1.436-1(g)(2)(iii) of the Treasury Regulations.

(c) Special Rules Under PRA 2010.

(i) Payments Under Social Security Leveling Options. For purposes of determining whether the limitations under Subsection 1(a) or 2(a) apply to payments under a social security leveling option, within the meaning of § 436(j)(3)(C)(i) of the Internal Revenue Code, the adjusted funding target attainment percentage for a Plan Year shall be determined in accordance with the "Special Rule for Certain Years" under § 436(j)(3) of the Internal Revenue Code and any Treasury Regulations or other published guidance thereunder issued by the Internal Revenue Service.

(ii) Limitation on Benefit Accruals. For purposes of determining whether the accrual limitation under Subsection 2(c) applies to the Plan, the adjusted funding target attainment percentage for a Plan Year shall be determined in accordance with the "Special Rule for Certain Years" under § 436(j)(3) of the Internal Revenue Code (except as provided under Section 203(b) of the Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010, if applicable).

(d) Interpretation of Provisions. The limitations imposed by this section of the Plan shall be interpreted and administered in accordance with § 436 of the Internal Revenue Code and § 1.436-1 of the Treasury Regulations.

8. Definitions. The definitions in the following Treasury Regulations apply for purposes of Subsections 1 through 7: § 1.436-1(j)(1) defining adjusted funding target attainment percentage; § 1.436-1(j)(2) defining annuity starting date; § 1.436-1(j)(6) defining prohibited payment; § 1.436-1(j)(8) defining Section 436 measurement date; and § 1.436-1(j)(9) defining an unpredictable contingent event and an unpredictable contingent event benefit.

9. Effective Date. The rules in Subsections 1 through 8 are effective for Plan Years beginning after December 31, 2009. For Plan Years beginning before January 1, 2010, the provisions of Section 436 of the Internal Revenue Code are hereby incorporated by reference.

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## **ARTICLE TEN--AMENDMENT AND TERMINATION**

**10.1 AMENDMENT.** Subject to the provisions of Article Eight, the Company, by action of its Board of Directors, shall have the right to amend, alter or modify the Plan at any time, or from time to time, in whole or in part. Any such amendment shall become effective under its terms upon adoption by the Company. The Retirement Committee may make administrative changes to qualify or maintain the Plan as a plan meeting the requirements of ERISA and Code section 401(a) and the Treasury regulations issued thereunder. However, no amendment affecting the duties, powers or responsibilities of the Trustee may be made without the written consent of the Trustee. No amendment (including a change in the actuarial basis for determining optional or early retirement benefits) shall be made to the Plan which shall:

(a) deprive any Participant without his consent of any portion of his Accrued Benefit prior to the date of such action. Notwithstanding the preceding sentence, a Participant's Accrued Benefit may be reduced to the extent permitted under Section 412(d)(2) of the Code. For purposes of this paragraph, a Plan amendment which has the effect of (1) eliminating or reducing an early retirement benefit or a retirement-type subsidy, or (2) eliminating an optional form of benefit, with respect to benefits attributable to service before the amendment shall be treated as reducing Accrued Benefits. In the case of a retirement-type subsidy, these provisions shall apply only with respect to a Participant who satisfies (either before or after the amendment) the pre-amendment conditions for the subsidy. In general, a retirement-type subsidy is a subsidy that continues after retirement, but does not include a qualified disability benefit, a medical benefit, a social security supplement, a death benefit (including life insurance); or

(b) make it possible, except as otherwise provided herein, for any part of the corpus or income of the Trust Fund (other than such part as may be required to pay taxes and administrative expenses) to be used for or diverted to purposes other than the exclusive benefit of the Participants or their Beneficiaries; or

(c) alter the schedule for vesting in Accrued Benefits with respect to any Participant who has completed three (3) or more years of Credited Service without his consent, or deprive any Participant of the nonforfeitable part of his Accrued Benefit.

Notwithstanding the other provisions of this Section or any other provisions of the Plan to the contrary, any amendment or modification of the Plan may be made retroactively, if necessary, or appropriate to conform to or to satisfy the conditions of any law, governmental regulation or ruling and to meet the requirements of the Employee Retirement Income Security Act of 1974, as it may be amended.

**10.2 TERMINATION OF THE PLAN.** The Board of Directors reserves the right to discontinue contributions under the Plan and to terminate the Plan in whole or in part with respect to a specific group of Employees. In the event of full or partial termination, Employees affected thereby shall have a nonforfeitable right to their Accrued Benefits, to the extent funded. The Administrator, upon full termination, shall cause the assets of the Plan to be allocated for the purposes set forth in, and in the order of priorities established by, Section 4044 of ERISA. Any residual assets remaining thereafter shall be returned to the Employer. The Employer shall not be liable to Participants for benefits other than those which can be provided by the Plan's assets.

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## **ARTICLE ELEVEN--TOP-HEAVY PROVISIONS**

**11.1 APPLICABILITY.** Only to the extent required by applicable law, the provisions of this Article shall become applicable in any Plan Year in which the Plan is a Top-Heavy Plan. The determination of whether the Plan is a Top-Heavy Plan shall be made each Plan Year by the Administrator.

**11.2 DEFINITIONS.** For purposes of this Article, the following definitions shall apply:

(a) **"Key Employee":** Key Employee means any Employee or former Employee (including any deceased Employee) who at any time during the Plan Year that includes the determination date was an officer of the Employer having annual Compensation greater than \$160,000 (as adjusted under Section 416(i)(1) of the Code), a five percent (5%) owner of the Employer, or a one percent (1%) owner of the Employer having annual Compensation of more than \$150,000. For this purpose, annual Compensation means Compensation within the meaning of Section 415(c)(3) of the Code. The determination of who is a Key Employee (including the terms "five percent (5%) owner" and "one percent (1%) owner") shall be made in accordance with Section 416(i)(1) of the Code and the applicable regulations and other guidance of general applicability issued thereunder.

(b) **"Top-Heavy Plan":**

(1) The Plan shall constitute a "Top-Heavy Plan" if any of the following conditions exist:

(A) The top-heavy ratio for the Plan exceeds sixty percent (60%) and the Plan is not part of any required aggregation group or permissive aggregation group of plans; or

(B) The Plan is a part of a required aggregation group of plans (but is not part of a permissive aggregation group) and the top-heavy ratio for the group of plans exceeds sixty percent (60%); or

(C) The Plan is a part of a required aggregation group of plans and part of a permissive aggregation group and the top-heavy ratio for the permissive aggregation group exceeds sixty percent (60%).

(2) If the Employer maintains one or more defined contribution plans (including any simplified employee pension plan funded with individual retirement accounts or annuities) and the Employer maintains or has maintained one or more defined benefit plans which have covered or could cover a Participant in this Plan, the top-heavy ratio is a fraction, the numerator of which is the sum of account balances under the defined contribution plans for all Key Employees and the actuarial equivalents of accrued benefits under the defined benefit plans for all Key Employees, and the denominator of which is the sum of the account balances under the defined contribution plans for all Participants and the actuarial equivalents of accrued benefits under the defined benefit plans for all Participants. Both the numerator and denominator of the top-heavy ratio shall include any distribution of an account balance or an accrued benefit made in the one (1)-year period ending on the determination date and any contribution due to a defined contribution pension plan but unpaid as of the determination date. In determining the accrued benefit of a non-Key Employee who is participating in a plan that is part of a required aggregation group, the method of determining such benefit shall be either (a) in accordance with the method, if any, that uniformly applies for accrual purposes under all plans maintained by the Employer or any related employer under Code Section 414, or (b) if there is no such method, as if such benefit accrued not more rapidly than the slowest accrual rate permitted under the fractional accrual rate of Code Section 411(b)(1)(C).

(3) For purposes of (1) and (2) above, the value of accrued benefits and the actuarial equivalents of accrued benefits shall be determined as of the most recent Valuation Date that falls within or ends with the twelve (12)-month period ending on the determination date. The account balances and accrued benefits of a Participant who is not a Key Employee but who was a Key Employee in a prior year shall be disregarded. The accrued benefits and account balances of Participants who have performed no Hours of Service with any employer

maintaining the plan for the one (1)-year period ending on the determination date shall be disregarded. The calculations of the top-heavy ratio, and the extent to which distributions, rollovers, and transfers are taken into account shall be made under Section 416 of the Code and regulations issued thereunder. Deductible Employee contributions shall not be taken into account for purposes of computing the top-heavy ratio. When aggregating plans, the value of account balances and accrued benefits shall be calculated with reference to the determination dates that fall within the same calendar year.

(4) Definition of terms for Top-Heavy status:

(A) "**Top-heavy ratio**" shall mean the following:

(1) If the Employer maintains one (1) or more defined benefit plans and the Employer has never maintained any defined contribution plans which have covered or could cover a Participant in this Plan, the top-heavy ratio is a fraction, the numerator of which is the sum of the Accrued benefits of all Key Employees as of the determination date (including any part of any Accrued benefit distributed in the one (1)-year period ending on the determination date), and the denominator of which is the sum of the Accrued benefits (including any part of any such benefit distributed in the one (1)-year period ending on the determination date) of all Participants as of the determination date.

(B) "**Permissive aggregation group**" shall mean the required aggregation group of plans plus any other plan or plans of the Employer which, when considered as a group with the required aggregation group, would continue to satisfy the requirements of Section 401(a)(4) and 410 of the Code.

(C) "**Required aggregation group**" shall mean (1) each qualified plan of the Employer (including any terminated plan) in which at least one Key Employee participates, and (2) any other qualified plan of the Employer which enables a plan described in (1) to meet the requirements of Section 401(a)(4) or 410 of the Code.

(D) "**Determination date**" shall mean, for any Plan Year subsequent to the first Plan Year, the last day of the preceding Plan Year. For the first Plan Year of the Plan, "determination date" shall mean the last day of that Plan Year.

(E) "**Valuation Date**" shall mean the last day of the Plan Year.

(F) Actuarial equivalence shall be based on the interest and mortality rates utilized to determine actuarial equivalence when benefits are paid from any defined benefit plan. If no rates are specified in said plan, the following shall be utilized: pre- and post-retirement interest -- five percent (5%); post-retirement mortality based on the Unisex Pension (1984) Table.

(5) Determination of Present Values and Amounts. This paragraph 5 shall apply for purposes of determining the present values of Accrued Benefits and the amounts of account balances of Employees as of the determination date.

(A) **Distributions During Year Ending on the Determination Date.** The present values of Accrued Benefits and the amounts of account balances of an Employee as of the determination date shall be increased by the distributions made with respect to the Employee under the Plan and any plan aggregated with the Plan under Section 416(g)(2) of the Code during the 1-year period ending on the determination date. The preceding sentence shall also apply to distributions under a terminated plan which, had it not been termination, would have been aggregated with the Plan under Section 416(g)(2)(A)(i) of the Code. In the case of a distribution made for a reason other than severance from employment, death, or disability, this provision shall be applied by substituting a "5-year period" for "1-year period."

(B) **Employees Not Performing Services During Year Ending on the Determination Date.** The Accrued Benefits and accounts of any individual who has not performed services for the Employer during the 1-year period ending on the determination date shall not be taken into account.

### **11.3 MINIMUM BENEFIT FOR ANY PLAN YEAR IN WHICH THE PLAN IS A TOP-HEAVY PLAN.**

(a) This minimum benefit shall be provided in the Plan for any Plan Year in which the Plan is a Top-Heavy Plan, subject to the provisions below. Each Participant who is a non-Key Employee and who has been credited with at least one thousand (1,000) Hours of Service shall accrue a benefit, to be provided solely by Employer contributions and expressed as a life annuity commencing at Normal Retirement Date, of two percent (2%) of his or her highest compensation averaged for the five (5) consecutive years for which the Participant had the highest compensation (as that term is defined in Section 9.2(b)). The minimum accrual shall be determined without regard to any Social Security benefit provided by Employer contributions under that system. If the benefit is received by such Participant in a form other than a single life annuity, such Participant must receive an amount that is that form of benefit's Actuarial Equivalent. If the benefit commences at a date other than at Normal Retirement Date, it must be equal to the Actuarial Equivalent of the minimum single life annuity benefit commencing at Normal Retirement Date.

(b) A non-Key Employee shall mean any Employee or former Employee including the Beneficiary of a deceased Employee or former Employee who was not a Key Employee during the Plan Year ending on the determination date.

(c) The minimum accrued benefit, when expressed as a life annuity commencing at Normal Retirement Date, shall not exceed twenty percent (20%) of the Participant's average compensation.

(d) The provisions in subsection (a) shall be applied so that there is no duplication of minimum benefits under this Plan and any defined contribution plan. The minimum benefit shall be offset by the Actuarial Equivalent of any amount payable to the participant from a defined contribution plan of the Employer.

(e) Any minimum accrued benefit required (to the extent required to be nonforfeitable under Section 416(b)) may not be forfeited under Code Sections 411(a)(3)(B) or 411(a)(3)(D).

(f) For purposes of satisfying the minimum benefit requirements of Section 416(c)(1) of the Code and the Plan, in determining years of service with the Employer, any service with the Employer shall be disregarded to the extent that such service occurs during a Plan Year when the Plan benefits (within the meaning of Section 410(b) of the Code) no Key Employee or former Key Employee.

**11.4 VESTING.** The minimum vesting schedule set forth in this Section 11.4 shall apply in any Plan Year in which the Plan is a Top-Heavy Plan, and apply to all benefits within the meaning of Section 411(a)(7) of the Code except those attributable to Employee contributions, if any, including benefits accrued before the effective date of Section 416 and benefits accrued before the Plan became a Top-Heavy Plan. Further, no reduction in vested benefits may occur in the event the Plan's status as a Top-Heavy Plan changes for any Plan Year and the vesting schedule is amended. In addition, if a Plan's status changes from a Top-Heavy Plan to that of a non-top-heavy plan, a Participant with three (3) or more years of Credited Service shall continue to have his vested rights determined under the schedule which he selects, in the event the vesting schedule is subsequently amended. For vesting to be determined under this schedule, an Employee must be credited with at least one (1) Hour of Service in any Plan Year in which the Plan is a Top-Heavy Plan. Payment of a Participant's vested Accrued Benefit under this Section shall be made in accordance with the provisions of Article Five.

#### **Years of Credited Service Vested Percentage**

*Less than 3 years 0%*

*3 years and thereafter 100%*

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## **ARTICLE TWELVE--MISCELLANEOUS PROVISIONS**

**12P1** I a n n o r a n y a m e n d m e n t of it nor the creation of any fund or amount nor the payment of benefits hereunder shall be construed as giving any legal or equitable right to any Employee or Participant against the Employer, its officers or Employees, or against the Trustee, and all liabilities under this Plan shall be satisfied, if at all, only out of the Trust Fund held by the Trustee. Participation in the Plan shall not give any Participant any right to be retained in the employ of the Employer, and the Employer hereby expressly retains the right to hire and discharge any Employee at any time with or without cause, as if the Plan had not been adopted, and any such discharged Participant shall have only such rights or interests in the Trust Fund as may be specified herein.

**12.2 SUCCESSOR TO THE EMPLOYER.** In the event of the merger, consolidation, reorganization or sale of assets of the Employer, under circumstances in which a successor person, firm or corporation shall carry on all or a substantial part of the business of the Employer, and such successor shall employ a substantial number of Employees of the Employer and shall elect to carry on the provisions of the Plan, such successor shall be substituted for the Employer under the terms and provisions of the Plan upon the filing in writing with the Trustee of its election to do so.

**12.3 MERGER OF PLANS.** In the case of any merger or consolidation of this Plan with, or transfer of the assets or liabilities of the Plan to, any other plan, the terms of such merger, consolidation or transfer shall be such that each Participant would receive (in the event of termination of this Plan or its successor immediately thereafter) a benefit which is not less than he would have received in the event of termination of this Plan immediately before such merger, consolidation or transfer.

**12.4 REPAYMENTS TO THE EMPLOYER.** Notwithstanding any provisions of this Plan to the contrary:

(a) Any Plan assets attributable to any contribution made to this Plan by the Employer because of a mistake of fact shall be returned to the Employer within one (1) year after the date of contribution.

(b) All Employer contributions hereunder are expressly contributed based upon such contributions' deductibility under Code Section 404. Any Plan assets attributable to any contributions made to this Plan by the Employer shall be refunded to the Employer, to the extent the income tax deduction for such contribution is disallowed. Such amount shall be refunded within one (1) taxable year after the date of such disallowance or within one (1) year of the resolution of any judicial or administrative process with respect to the disallowance.

**12.5 BENEFITS NOT ASSIGNABLE.** Except as provided in Section 414(p) of the Code with respect to "qualified domestic relations orders," or as provided in Section 401(a)(13)(C) of the Code with respect to certain judgments and settlements, the right of any Participant or his Beneficiary to any benefit or payment hereunder shall not be subject to voluntary or involuntary alienation or assignment.

**12.6 DISTRIBUTION TO LEGALLY INCAPACITATED.** In the event any benefit is payable to a minor or to a person deemed to be incompetent or otherwise under legal disability, or who is by sole reason of advanced age, illness, or other physical or mental incapacity, incapable of handling the disposition of his property, the Administrator, in its sole discretion, may direct the Trustee to apply all or any portion of such benefits, directly to the care, comfort, maintenance, support, education or use of such person or to pay or distribute all or any portion of such benefit to (a) the spouse of such person, (b) the parent of such person, (c) the guardian, committee or other legal representative, wherever appointed, of such person, (d) the person with whom such person shall reside, (e) any other person having the care and control of such person, or (f) such person. The receipt of any such payment or distribution shall be a complete discharge of liability for Plan obligations.

**12.7 MISSING PERSONS.** If the Administrator is unable to locate a proper payee within one year after a benefit becomes

payable, the Administrator may treat the benefit as a forfeiture; however, if a claim for benefits is subsequently presented by a person entitled to a payment, the forfeited amount shall be reccredited upon verification of the claim, except for those amounts that have been paid pursuant to an escheat or other applicable law.

**12.8 EXPENSES.** To the extent permissible under applicable law, all reasonable expenses of the Plan and Trust Fund shall be paid by, and constitute a charge upon, the Trust Fund, except to the extent that such expenses may have been paid by an Employer in its sole and absolute discretion. Such expenses shall include any expenses incident to the functioning of the Plan, including, without limitation, attorneys' fees and the compensation of actuaries and other agents, accounting and clerical charges, expenses, if any, of being bonded as required by ERISA, the premiums of plan termination insurance purchased from the Pension Benefit Guaranty Corporation, and any other costs of administering the Plan.

**12.9** e r m i n e d u n d e r t h e t e r m s  
as in effect at his date of separation from service.

**12.10 GOVERNING LAW.** The provisions of this Plan shall be construed under the laws of the state of New York, except to the extent such laws are pre-empted by Federal law.

**12.11 CONSTRUCTION.** Wherever appropriate, the use of the masculine gender shall be extended to include the feminine or neuter or vice versa; and the singular form of words shall be extended to include the plural; and the plural shall be restricted to mean the singular.

**12.12 HEADINGS.** The Article headings and Section numbers are included solely for ease of reference. If there is any conflict between such headings or numbers and the text of the Plan, the text shall control.

**12.13 COUNTERPARTS.** This Plan may be executed in any number of counterparts, each of which shall be deemed an original; said counterparts shall constitute but one and the same instrument, which may be sufficiently evidenced by any one counterpart.

**IN WITNESS WHEREOF,** the Employer has caused this Plan to be executed on the **21st** day of December, 2012.

MINERALS TECHNOLOGIES INC.

By: /s/ Thomas J. Meek

Meek

Print Name: Thomas J.

On behalf of the Retirement Committee

**SCHEDULE A**

## Early Retirement Table

The following table sets forth the percentages which will apply at the ages indicated in the computation of early retirement benefits pursuant to Section 4.4(b)(2)(A):

<b>Age</b>	<b>Percentage</b>
65	100
64	96
63	92
62	88
61	84
60	80
59	76
58	72
57	68
56	64
55	60



**SCHEDULE B**

## Alternate Early Retirement Table

The following table sets forth the percentages which will apply at the ages indicated in the computation of early retirement benefits pursuant to Section 4.4(b)(2)(B):

<b>Age</b>	<b>Minimum Years of Service</b>	<b>Percentage</b>
64	26	100
64		
63	27	100
62	28	100
61	29	100
60	30	100
59	31	96
58	32	92
57	33	88
56	34	84
55	35	80

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**SCHEDULE C**

## Vested Benefit Table

The following table sets forth the percentages which will apply at the ages indicated in the computation of vested benefits pursuant to Section 4.4(b)(2)(C):

**Age That Annuity  
Payments Commence**

**Percentage of  
Vested Annuity**

**Commence Commence Commence**

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65+	100
64	94
63	88
62	82
61	76
60	70
59	64
58	58
57	52
56	46
55	40

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## SCHEDULE D

A Participant's Credited Service pursuant to Section 2.1 shall include service with the following employers as provided herein.

(1) Service With Zedmark Refractories Corporation and/or Zedmark Inc. Credited Service, for purposes of vesting pursuant to Section 4.4(a), shall include each full year of service for the period during which a Participant was employed by Zedmark Refractories Corporation and/or Zedmark, Inc. prior to October 3, 1989, except if such Participant was covered at such time by a collective bargaining agreement that did not provide for coverage of such Participant under the Pfizer Inc. Retirement Annuity Plan (the "Pfizer Plan"). Credited Service for purposes of benefit accrual under the Career Earnings Formula shall include each full year of service for the period during which a Participant was employed by Zedmark Refractories Corporation and/or Zedmark, Inc. prior to October 3, 1989, provided such number of full years of service may not exceed the number of full years of service the Participant is employed by the Company after October 3, 1989; and provided, further, such Participant was not covered, on October 3, 1989, by a collective bargaining agreement that did not provide for coverage of such Participant under the Pfizer Plan.

(2) Service With Nalco Chemical Company. Credited Service, for purposes of vesting under Section 4.4 and eligibility for early retirement under Section 4.4(b)(2)(A) and (B), shall include each full year of service for the period during which a Participant was employed by Nalco Chemical Company prior to June 1, 1988, if such Participant was a transferred employee, as such term is defined in the Purchase Agreement dated June 1, 1988, between Quigley Company, Inc. and Pfizer Inc., as purchasers and Nalco Chemical Company, as seller.

(3) Service With Martin Marietta Magnesia Specialties, Inc. With respect to Participants who were employees of Martin Marietta Magnesia Specialties, Inc. on April 30, 2001, who became Employees on May 1, 2001, Credited Service, for purposes of vesting under Section 4.4 and eligibility for early retirement under Section 4.4(b)(2), shall include each full year of service for the period during which a Participant was employed by Martin Marietta Magnesia Specialties, Inc. prior to May 1, 2001; provided such Participant was not covered, on April 30, 2001, by the terms of a collective bargaining agreement of which Martin Marietta Magnesia Specialties, Inc. was a party.

**MINERALS TECHNOLOGIES INC. SAVINGS AND INVESTMENT PLAN**

**WHEREAS**, Minerals Technologies Inc. (hereinafter referred to as the "Employer") heretofore adopted the Minerals Technologies Inc. Savings and Investment Plan (hereinafter referred to as the "Plan") for the benefit of its eligible Employees; and

**WHEREAS**, the Employer reserved the right to amend the Plan; and

**WHEREAS**, the Employer heretofore amended the Plan from time to time and desires to restate the Plan by incorporating all prior amendments, and to further amend the Plan to the extent required by law; and

**WHEREAS**, it is intended that the Plan is to continue to be a qualified profit sharing plan under Section 401(a) and 501(a) of the Internal Revenue Code for the exclusive benefit of the Participants and their Beneficiaries; and

**WHEREAS**, it is intended that the cash or deferred arrangement forming part of the Plan is to continue to qualify under Section 401(k) of the Internal Revenue Code;

**NOW, THEREFORE**, the Plan is hereby amended and restated, effective as of January 1, 2013, except where the provisions of the Plan (or the requirements of applicable law) shall otherwise specifically provide, in its entirety as follows:

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## ARTICLE I-- DEFINITIONS

For purposes of the Plan, unless the context or an alternative definition specified within another Article provides otherwise, the following words and phrases shall have the definitions provided:

**1.1** "**ACCOUNT**" shall mean the individual bookkeeping accounts maintained for a Participant under the Plan which shall record (a) the Participant's allocations of Employer contributions and forfeitures, if any, (b) amounts of Compensation contributed to the Plan pursuant to the Participant's election under Section 4.1, (c) any after-tax contributions made to the Plan under Section 4.2, (d) any amounts rolled over or transferred to this Plan under Section 4.4 from another qualified retirement plan, or from another qualified plan in connection with a plan merger and (e) the allocation of Trust investment experience.

**1.2** "**ADMINISTRATOR**" shall mean the Plan Administrator appointed from time to time in accordance with the provisions of Article Nine hereof.

**1.3** "**BENEFICIARY**" shall mean any person, trust, organization, or estate entitled to receive payment under the terms of the Plan upon the death of a Participant.

**1.4** "**BREAK IN SERVICE**" shall have the meaning set forth in Section 2.2.

**1.5** "**CODE**" shall mean the Internal Revenue Code of 1986, as amended from time to time.

**1.6** "**COMPENSATION**" shall mean the sum of (1) the base pay and bonuses received by a Participant from the Employer in a Plan Year, plus any overtime pay, premium pay, call-in/call-back pay and vacation pay, but excluding contest awards, remuneration received in the form of salary continuance or lump sum severance while no longer providing services to the Employer and other similar payments and (2) any amount which is contributed by the Employer on behalf of the Participant pursuant to a salary reduction agreement and which is not includable in gross income under Section 125, 132(f)(4), 402(e)(3), 402(h) or 403(b) of the Code.

Any compensation described in this Section 1.6 does not fail to be Compensation merely because it is paid after the Participant's severance from employment with the Employer, provided the Compensation is paid by the later of 2½ months after severance from employment with the Employer or the end of the Plan Year that includes the date of severance from employment.

In addition, payment for unused accrued bona fide vacation shall be included as Compensation described in this Section 1.6 if (i) the Participant would have been able to use the leave if employment had continued, (ii) such amounts are paid by the later of 2½ months after severance from employment with the Employer or the end of the Plan Year that includes the date of severance from employment, and (iii) such amounts would have been included as Compensation if they were paid prior to the Participant's severance from employment with the Employer.

In addition to other applicable limitations set forth in the Plan, and notwithstanding any other provision of the Plan to the contrary, the annual Compensation of each Participant taken into account under the Plan for a calendar year shall not exceed the amount set forth in Section

401(a)(17) of the Code, as adjusted by the Secretary of the Treasury or his delegate for increases in the cost of living in accordance with Section 401(a)(17)(B) of the Code. The cost-of-living adjustment in effect for a calendar year applies to any period, not exceeding twelve (12) months, over which Compensation is determined (determination period) beginning in such calendar year. If a determination period consists of fewer than twelve (12) months, the annual compensation limit shall be multiplied by a fraction, the numerator of which is the number of months in the determination period, and the denominator of which is twelve (12).

Notwithstanding the foregoing, for purposes of applying the limitations described in Section 11.1, and for purposes of defining Compensation under Section 1.13, Section 1.15, and Article Thirteen of the Plan, Compensation shall mean Compensation within the meaning of Treas. Reg. §1.415(c)-2(d)(2), and shall include any elective amounts that are not includible in the gross income of the Employee by reason of Section 125, 132(f)(4), 402(e)(3), 402(h) or 403(b) of the Code.

**1.7** "**DISABILITY**" shall mean a medically determinable physical or mental impairment for which a Participant is entitled to receive benefits under the Employer's long-term disability plan.

**1.8** "**EFFECTIVE DATE**" shall mean January 1, 2013, except where the provisions of the Plan (or the requirements of applicable law) shall otherwise specifically provide. The rights of any Participant who terminated employment with the Employer prior to the applicable date shall be established under the terms of the Plan and Trust as in effect at the time of the Participant's termination from employment, unless the Participant subsequently returns to employment with the Employer, or unless otherwise provided under the terms of the Plan. Rights of spouses and Beneficiaries of such Participants shall also be governed by those documents.

**1.9** "**EMPLOYEE**" shall mean a common law employee of the Employer. The term "Employee" shall also include any Leased Employee deemed to be an Employee of the Employer as provided in Section 414(n) or 414(o) of the Code.

**1.10** "**EMPLOYER**" shall mean Minerals Technologies Inc. (the "Company") and any subsidiary or affiliate which is a member of its "related group" (as defined in Section 2.4(b)) which has adopted the Plan (a "Participating Affiliate"), and shall include any successor(s) thereto which adopt this Plan. Any such subsidiary or affiliate of the Company may adopt the Plan with the approval of its board of directors (or noncorporate counterpart) subject to the approval of the Company. The provisions of this Plan shall apply equally to each Participating Affiliate and its Employees except as specifically set forth in the Plan; provided, however, notwithstanding any other provision of this Plan, the amount and timing of contributions under Article 4 to be made by any Employer which is a Participating Affiliate may be made subject to the approval of the Company. For purposes hereof, each Participating Affiliate shall be deemed to have appointed the Company as its agent to act on its behalf in all matters relating to the administration, amendment, termination of the Plan and the investment of the assets of the Plan. For purposes of the Code and ERISA, the Plan as maintained by the Company and the Participating Affiliates shall constitute a single plan rather than a separate plan of each Participating Affiliate. All assets in the Trust shall be available to pay benefits to all Participants and their Beneficiaries.

**1.11** "**EMPLOYMENT DATE**" shall mean the first date as of which an Employee is credited with an Hour of Service, provided that, in the case of a Break in Service, the Employment Date shall be the first date thereafter as of which an Employee is credited with an Hour of Service.

**1.12** "**FAIL-SAFE CONTRIBUTION**" shall mean a qualified nonelective contribution which is a contribution (other than matching contributions or Qualified Matching Contributions (within the meaning of Section 10.2)) made by the Employer and allocated to Participants' accounts that the Participants may not elect to receive in cash until distribution from the Plan; that are nonforfeitable when made; and that are distributable only in accordance with the distribution provisions under Section 401(k) of the Code and the regulations promulgated thereunder.



**1.13 "HIGHLY-COMPENSATED EMPLOYEE"** shall mean any Employee of the Employer who:

- (a) was a five percent (5%) owner of the Employer (as defined in Section 416(i)(1)) of the Code) at any time during the "determination year" or "look-back year"; or
- (b) earned Compensation from the Employer during the "look-back year" in excess of the amount set forth in Section 414(q)(1) of the Code, as adjusted in accordance with Section 415(d) of the Code, and was in the top twenty percent (20%) of Employees by Compensation for such year.

An Employee who terminated employment prior to the "determination year" shall be treated as a Highly-Compensated Employee for the "determination year" if such Employee was a Highly-Compensated Employee when such Employee terminated employment, or was a Highly-Compensated Employee at any time after attaining age fifty-five (55).

For purposes of this Section, the "determination year" shall be the Plan Year for which a determination is being made as to whether an Employee is a Highly-Compensated Employee. The "look-back year" shall be the twelve (12) month period immediately preceding the "determination year."

**1.14 "HOUR OF SERVICE"** shall have the meaning set forth below:

(a) An Hour of Service is each hour for which an Employee is paid, or entitled to payment, for the performance of duties for the Employer, during the applicable computation period.

(b) An Hour of Service is each hour for which an Employee is paid, or entitled to payment, by the Employer on account of a period of time during which no duties are performed (irrespective of whether the employment relationship has terminated) due to vacation, holiday, illness, incapacity (including disability), layoff, jury duty, military duty, or leave of absence. Notwithstanding the preceding sentence,

(i) No more than five hundred and one (501) Hours of Service shall be credited under this paragraph (b) to any Employee on account of any single continuous period during which the Employee performs no duties (whether or not such period occurs in a single computation period). Hours under this paragraph shall be calculated and credited pursuant to Section 2530.200b-2 of the Department of Labor Regulations which is incorporated herein by reference;

(ii) An hour for which an Employee is directly or indirectly paid, or entitled to payment, on account of a period during which no duties are performed shall not be credited to the Employee if such payment is made or due under a plan maintained solely for the purpose of complying with applicable workmen's compensation, or unemployment compensation or disability insurance laws; and

(iii) Hours of Service shall not be credited for a payment which solely reimburses an Employee for medical or medically related expenses incurred by the Employee.

For purposes of this paragraph (b), a payment shall be deemed to be made by or due from the Employer regardless of whether such payment is made by or due from the Employer directly, or indirectly through, among others, a trust fund, or insurer, to which the Employer contributes or pays premiums and regardless of whether contributions made or due to the trust fund, insurer or other entity are for the benefit of particular Employees or are on behalf of a group of Employees in the aggregate.

(c) An Hour of Service is each hour for which back pay, irrespective of mitigation of damages, is either awarded or agreed to by the Employer. The same Hours of Service shall not be credited both under paragraph (a) or paragraph (b), as the case may be, and under this paragraph (c). Thus,

for example, an Employee who receives a back pay award following a determination that he was paid at an unlawful rate for Hours of Service previously credited shall not be entitled to additional credit for the same Hours of Service. Crediting of Hours of Service for back pay awarded or agreed to with respect to periods described in paragraph (b) shall be subject to the limitations set forth in that paragraph.

(d) Hours of Service under this Section shall be determined under the terms of the Family and Medical Leave Act of 1993 and the Uniformed Services Employment and Reemployment Rights Act of 1994.

For purposes of crediting Hours of Service to Employees for whom records of actual Hours of Service are not maintained or available, the "weeks of employment" method shall be utilized. Under this method, an Employee shall be credited with ninety (90) Hours of Service for each bi-weekly pay period for which the Employee would be required to be credited with at least one (1) Hour of Service pursuant to the provisions enumerated above.

Hours of Service shall be credited for any individual considered an Employee for purposes of this Plan under Section 414(n) of the Code.

**1.15 "LEASED EMPLOYEE"** shall mean any person (other than an employee of the recipient) who, pursuant to an agreement between the recipient Employer and any other person or organization, has performed services for the recipient Employer (determined in accordance with Section 414(n)(6) of the Code) on a substantially full-time basis for a period of at least one (1) year and where such services are performed under the primary direction and control of the recipient Employer. A person shall not be considered a Leased Employee if the total number of Leased Employees does not exceed twenty percent (20%) of the Nonhighly-Compensated Employees employed by the recipient Employer, and if any such person is covered by a money purchase pension plan providing (a) a nonintegrated employer contribution rate of at least ten percent (10%) of Compensation, (b) immediate participation, and (c) full and immediate vesting.

**1.16 "NONHIGHLY-COMPENSATED EMPLOYEE"** shall mean an Employee of the Employer who is not a Highly-Compensated Employee.

**1.17 "NORMAL RETIREMENT DATE"** shall mean the Participant's sixty-fifth (65<sup>th</sup>) birthday. The date on which the Participant attains age sixty-five (65) shall also be the Participant's Normal Retirement Age.

**1.18 "PARTICIPANT"** shall mean any Employee who has satisfied the participation requirements of Article Three.

**1.19 "PLAN"** shall mean the Minerals Technologies Inc. Savings and Investment Plan, as set forth herein and as may be amended from time to time.

**1.20 "PLAN YEAR"** shall mean the twelve (12)-consecutive month period beginning January 1 and ending December 31.

**1.21 "SPOUSE,"** whether or not capitalized, shall mean, with respect to any Participant, an individual who is the Participant's opposite sex spouse, and references to a "married" Participant shall mean a Participant who is married to an opposite sex spouse.

**1.22 "TRUST"** shall mean the Trust Agreement entered into between the Employer and the Trustee forming part of this Plan, together with any amendments thereto. "Trust Fund" shall mean any and all property held by the Trustee pursuant to the Trust Agreement, together with income therefrom.

**1.23** "TRUSTEE" shall mean the Trustee or Trustees appointed by the Employer, and any successors thereto.

**1.24** "VALUATION DATE" shall mean each day on which the New York Stock Exchange is open for business.

**1.25** "YEAR OF SERVICE" or "SERVICE" shall have the meanings ascribed to those terms in Article Two of the Plan.

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## ARTICLE II-- SERVICE DEFINITIONS AND RULES

Service is the period of employment credited under the Plan. Definitions and special rules related to Service are as follows:

**2.1 YEAR OF SERVICE.** An Employee shall be credited with a Year of Service if he completes at least one thousand (1,000) Hours of Service during the twelve (12)-consecutive month period commencing on his Employment Date. If an Employee fails to be credited with at least one thousand (1,000) Hours of Service during that computation period, he shall be credited with a Year of Service for such purposes if he is credited with at least one thousand (1,000) Hours of Service in any Plan Year commencing on or after his Employment Date. For such purposes, an Employee shall be credited with a Year of Service upon completion of the one thousandth (1,000<sup>th</sup>) hour in each such twelve (12)-month period.

**2.2 BREAK IN SERVICE.** A Break in Service shall be a twelve (12)-month computation period (as used for measuring Years of Service) in which an Employee or Participant is not credited with at least five hundred and one (501) Hours of Service.

**2.3 LEAVE OF ABSENCE.** A Participant on an unpaid leave of absence pursuant to the Employer's normal personnel policies shall be credited with Hours of Service at his regularly-scheduled weekly rate while on such leave, provided the Employer acknowledges in writing that the leave is with its approval. These Hours of Service shall be credited only for purposes of determining if a Break in Service has occurred. Hours of Service during a paid leave of absence shall be credited as provided in Section 1.14.

For any individual who is absent from work for any period by reason of the individual's pregnancy, birth of the individual's child, placement of a child with the individual in connection with the individual's adoption of the child, or by reason of the individual's caring for the child for a period beginning immediately following such birth or adoption, the Plan shall treat as Hours of Service, solely for determining if a Break in Service has occurred, the following Hours of Service:

(a) the Hours of Service which otherwise normally would have been credited to such individual but for such absence; or

(b) in any case where the Administrator is unable to determine the Hours of Service, on the basis of an assumed eight (8) hours per day.

In no event shall more than five hundred and one (501) of such hours be credited by reason of such period of absence. The Hours of Service shall be credited in the computation period (used for measuring Years of Service) which starts after the leave of absence begins. However, the Hours of Service shall instead be credited in the computation period in which the absence begins if it is necessary to credit the Hours of Service in that computation period to avoid the occurrence of a Break in Service.

**2.4 SERVICE IN EXCLUDED JOB CLASSIFICATIONS OR WITH RELATED COMPANIES.**

(a) Service while a Member of an Ineligible Classification of Employees. An Employee who is a member of an ineligible classification of Employees shall not be eligible to participate in the Plan while a member of such ineligible classification. However, if any such Employee is transferred to an

eligible classification, such Employee shall be credited with any Years of Service completed while a member of such an ineligible classification. For this purpose, an Employee shall be considered a member of an ineligible classification of Employees for any period during which he is employed in a job classification which is excluded from participating in the Plan under Section 3.1 below.

(b) Service with Related Group Members. Subject to Section 2.1, for each Plan Year in which the Employer is a member of a "related group", as hereinafter defined, all Service of an Employee or Leased Employee (hereinafter collectively referred to as "Employee" solely for purposes of this Section 2.4(b)) with any one or more members of such related group shall be treated as employment by the Employer for purposes of determining the Employee's Years of Service. The transfer of employment by any such Employee to another member of the related group shall not be deemed to constitute a retirement or other termination of employment by the Employee for purposes of this Section 2.4(b), but the Employee shall be deemed to have continued in employment with the Employer for purposes of determining the Employee's Years of Service. For purposes of this Section 2.4(b), "related group" shall mean the Employer and all corporations, trades or businesses (whether or not incorporated) which constitute a controlled group of corporations with the Employer, a group of trades or businesses under common control with the Employer, or an affiliated service group which includes the Employer, within the meaning of Section 414(b), Section 414(c), or Section 414(m), respectively, of the Code or any other entity required to be aggregated under Code Section 414(o).

(c) Construction. This Section is included in the Plan to comply with the Code provisions regarding the crediting of Service, and not to extend any additional rights to Employees in ineligible classifications other than as required by the Code and regulations thereunder.

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## **ARTICLE III-- PLAN PARTICIPATION**

**3.1** **PARTICIPATION.** All Employees participating in the Plan prior to the Plan's restatement shall continue to participate, subject to the terms hereof.

Subject to the following provisions of this Section 3.1, each other Employee shall become a Participant under the Plan as soon as administratively possible following his Employment Date.

Provided, however, that any Employee (i) who is classified by the Employer as a temporary employee or (ii) with respect to an individual who is hired on or after September 14, 2007, who is scheduled to complete less than twenty (20) Hours of Service per week, shall become a Participant as soon as administratively possible following his completion of a Year of Service.

In no event, however, shall any Employee (or other individual) participate under the Plan while he is:  
(i) included in a unit of Employees covered by a collective bargaining agreement between the Employer and the Employee representatives under which retirement benefits were the subject of good faith bargaining, unless the terms of such bargaining agreement expressly provides for the inclusion in the Plan; (ii) employed as an independent contractor on the payroll records of the Employer (regardless of any subsequent reclassification by the Employer, any governmental agency or court); (iii) employed as a Leased Employee; (iv) employed as a nonresident alien who receives no earned income (within the meaning of Section 911(d)(2) of the Code) from the Employer which constitutes income from sources within the United States (within the meaning of Section 861(a)(3) of the Code); or (v) employed as a consultant.

Notwithstanding the foregoing and commencing as soon as administratively feasible after September 18, 2012, any Employee who is a member of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521, at Minteq International, Inc., Dover Ohio plant shall be eligible to participate in the Plan subject to the eligibility requirements of this Section 3.1.

Any Employee who is a United States citizen or a "Participating Resident Alien" (as defined below) and who is employed outside the continental limits of the United States in the service of a foreign subsidiary (including foreign subsidiaries of such foreign subsidiary) of the Employer shall be considered, for all purposes of this Plan, as employed in the service of the Employer, if (i) the employer has entered into an agreement under Section 3121(l) of the Code which applies to the foreign subsidiary of which such person is an employee, and (ii) contributions under a funded plan of deferred compensation, whether or not a plan described in Section 401(a), 403(a), or 405(a) of the Code, are not provided by any other person with respect to the remuneration paid to such individual by the foreign subsidiary. A "Participating Resident Alien" means an Employee who is not a United States citizen but (i) has previously been employed as a lawful resident alien in the service of an Employer within the United States, (ii) was a Participant in the Plan during such employment, (iii) is currently employed at a location outside both the person's country of citizenship and the United States, and (iv) continues to maintain his eligibility for employment as a lawful resident alien within the United States.

**3.2** **RE-EMPLOYMENT OF FORMER PARTICIPANT.** A Participant whose participation ceased because of termination of employment with the Employer shall resume participating upon his reemployment as an eligible Employee; provided, however, that such an individual shall be entitled to commence elective deferrals (within the meaning of Section 4.1) as soon as administratively possible following his return to participation in the Plan.

**3.3** **TERMINATION OF ELIGIBILITY.** In the event a Participant is no longer a member of an eligible class of Employees and he becomes ineligible to participate, such Employee shall resume participating upon his return to an eligible class of Employees; provided, however, that such an individual shall be entitled to commence elective deferrals (within the meaning of

Section 4.1) as soon as administratively possible following his return to participation in the Plan.

In the event an Employee who is not a member of an eligible class of Employees becomes a member of an eligible class, such Employee shall participate upon becoming a member of an eligible class of Employees, if such Employee has otherwise satisfied the eligibility requirements of Section 3.1 and would have otherwise previously become a Participant; provided, however, that such an individual shall be entitled to commence elective deferrals (within the meaning of Section 4.1) as soon as administratively possible following his becoming a Participant.

**3.4 COMPLIANCE WITH USERRA.** Notwithstanding any provision of this Plan to the contrary, Participants shall receive service credit and be eligible to make elective deferrals (within the meaning of Section 4.1) and receive Employer contributions with respect to periods of qualified military service (within the meaning of Section 414(u)(5) of the Code) in accordance with Section 414(u) of the Code.

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## **ARTICLE IV-- ELECTIVE DEFERRALS, EMPLOYER CONTRIBUTIONS, AND ROLLOVERS AND TRANSFERS FROM OTHER PLANS**

### **4.1 ELECTIVE DEFERRALS.**

(a) *Elections.* Subject to the provisions of Section 4.2 below, a Participant may elect to contribute to the Plan a portion of his Compensation for a Plan Year on a pre-tax basis. The amount of a Participant's Compensation contributed in accordance with the Participant's election shall be withheld by the Employer from the Participant's Compensation on a ratable basis throughout the Plan Year. For purposes of making elective deferrals pursuant to this Section, only Compensation earned while eligible to make such deferrals shall be considered. The amount deferred on behalf of each Participant shall be contributed by the Employer to the Plan and allocated to the portion of the Participant's Account consisting of pre-tax contributions.

Except as otherwise provided in Section 4.1(e) below, each Participant may elect to contribute from two percent (2%) to twenty percent (20%) of such Participant's Compensation as a pre-tax contribution. Notwithstanding the foregoing, a Participant who is a member of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521, at Minteq International, Inc., Dover Ohio plant may make a pre-tax contribution election to defer from one percent (1%) to one hundred percent (100%) of any flat rate bonus paid to him during the Plan Year that is categorized in the Employer's payroll records as a "Dover Bonus," but any such election shall be separate from the Participant's normal elections and shall be made in accordance with procedures established the Administrator.

Notwithstanding the foregoing, any Employee, upon first becoming eligible to participate in the Plan pursuant to Section 3.1 or upon being reemployed by an Employer on or after January 1, 2013, who fails to affirmatively make any deferral election (including an election to contribute zero percent (0%) of his Compensation to the Plan) within the time prescribed by the Administrator, shall be deemed to have elected to defer three percent (3%) of his Compensation as a pre-tax contribution ("deemed elective deferral"). The foregoing provision shall not apply to any Employee who is a member of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521, at Minteq International, Inc., Dover Ohio plant. The Administrator shall provide to each Employee a notice of his right to receive the amount of the deemed elective deferral in cash and his right to increase or decrease his rate of elective deferrals. The Administrator shall also provide each such Employee a reasonable period to exercise such right before the date on which the cash is currently available.

(b) *Changes in Election.* A Participant may prospectively elect to change or revoke the amount (or percentage) of his elective deferrals during the Plan Year by filing a written election with the Administrator, or via such other method as permitted by the Administrator in accordance with applicable law.

(c) *Limitations on Deferrals.* Except to the extent permitted under Section 4.1(e), no Participant shall be permitted to make elective deferrals during any taxable year in excess of the dollar limitation contained in Section 402(g) of the Code in effect for such taxable year.

(d) *Administrative Rules.* All elections made under this Section 4.1, including the amount and frequency of deferrals, shall be subject to the rules of the Administrator which shall be consistently applied and which may be changed from time to time.

(e) *Catch-up Contributions.* All Participants who are eligible to make elective deferrals under Section 4.1(a) and who have attained age fifty (50) before the close of the taxable year shall be



eligible to make catch-up contributions in accordance with, and subject to the limitations of, Section 414(v) of the Code, as adjusted by the Secretary of the Treasury for cost-of-living increases under Section 414(v)(2)(C) of the Code.

Such catch-up contributions shall not be taken into account for purposes of the provisions of the Plan implementing the required limitations of Section 402(g) and 415 of the Code. The Plan shall not be treated as failing to satisfy the requirements of the Plan implementing the requirements of Section 401(k)(3), 401(k)(11), 401(k)(12), 402A, 410(b), or 416 of the Code, as applicable, by reason of the making of such catch-up contributions.

**4.2 EMPLOYEE AFTER-TAX CONTRIBUTIONS.** Subject to the following provisions of this Section 4.2, a Participant may elect to contribute from two percent (2%) to twenty percent (20%) of his Compensation to the Plan on an after-tax basis, in accordance with procedures and limitations established by the Administrator which shall be consistently applied and which may be changed from time to time. A Participant may prospectively elect to change or revoke the amount (or percentage) of his after-tax contributions during the Plan Year in accordance with procedures established by the Administrator. Notwithstanding the foregoing, for purposes of this Section 4.2, "Compensation" of a Participant who is a member of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521, at Minteq International, Inc., Dover Ohio plant shall exclude any flat rate bonus paid to him during the Plan Year which is categorized on the Employer's payroll records as a "Dover Bonus."

Employee after-tax contributions shall be subject to the limitations under Section 10.3 and Section 11.1 and for any Participant the total elective deferrals made under Section 4.1 plus any after-tax contributions made under this Section 4.2 shall not exceed twenty percent (20%) of the Participant's Compensation for the Plan Year.

Any after-tax contributions made by a Participant shall be contributed by the Employer to the Plan and allocated to the portion of the Participant's Account consisting of after-tax contributions.

### **4.3 EMPLOYER CONTRIBUTIONS.**

(a) *Employer Matching Contributions.* The Employer matching contributions under this Section 4.3 are intended to satisfy the safe-harbor contribution rules of Section 401(k)(12) of the Code. The Plan shall satisfy both the notice requirement and the contribution requirement described below. The safe-harbor contribution requirement must be satisfied without regard to Section 401(l) of the Code.

(i) *Notice Requirement* - At least thirty (30) days and no more than ninety (90) days, prior to the beginning of each Plan Year, the Administrator shall provide each Employee eligible to participate in the Plan with notice in writing in a manner calculated to be understood by the average eligible Employee, or through an electronic medium reasonably accessible to such Employee, of the contribution requirement described below, any other contributions under the Plan, and the conditions under which such contributions are made, the type and amount of Compensation that may be deferred under the Plan, the procedures for making deferrals (within the meaning of Section 4.1) and the administrative and timing requirements that apply, the periods available under the Plan for making elective deferrals, the plan to which safe-harbor contributions will be made (if different than the Plan), and the withdrawal and vesting provisions applicable to contributions under the Plan. During the ninety (90) day period ending with the day an Employee becomes eligible to participate in the Plan, the same notice shall be provided to that Employee. Notwithstanding the foregoing, the notice shall satisfy both the content requirement and timing requirement of Section 1.401(k)-3(d) of the Treasury Regulations, and any subsequent guidance issued by the Internal Revenue Service.

(ii) *Safe-Harbor Basic Matching Contribution* - The Employer shall make an "Employer

Safe-Harbor Basic Matching Contribution" on behalf of each Employee participating in the Plan in an amount equal to:

- (A) one hundred percent (100%) of the first three percent (3%) of the Participant's Compensation contributed as elective deferrals or after-tax contributions, plus
- (B) fifty percent (50%) of the next two percent (2%) of the Participant's Compensation contributed as elective deferrals or after-tax contributions.

The foregoing contributions shall be determined on a payroll-by-payroll period basis. Such contributions shall be made no later than the end of the calendar quarter following the calendar quarter in which the applicable payroll period ends, and may be made in cash (which may be invested in Minerals Technologies Inc. common stock) or in the form of Minerals Technologies Inc. common stock.

Notwithstanding the foregoing, no Employer matching contributions (including Safe-Harbor Basic Matching Contributions) shall be made for any Participant who is a member of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521, at Minteq International, Inc., Dover Ohio plant .

*(b) Employer Discretionary Contributions.* Employer discretionary contributions may be made at the discretion of the Board of Directors of Minerals Technologies Inc. for any Plan Year, for any Participant who is a member of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521 , at Minteq International, Inc., Dover Ohio plant, subject to limits for tax deductions under the Code and provided that the special allocation in Section 13.3 has been satisfied if the Plan is a Top-Heavy Plan (as defined in Section 13.2(b)).

To be eligible for an allocation of the Employer discretionary contribution for a Plan Year, a Participant must be a member of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521 , at Minteq International, Inc., Dover Ohio plant and be employed by the Employer on the last day of the period for which such Employer discretionary contribution is made to the Plan.

Any Employer discretionary contribution made under this Section 4.3 shall either be allocated among the Accounts of eligible Participants (i) in accordance with the ratio that each such eligible Participant's Compensation bears to the total Compensation of all such eligible Participants for the Plan Year or other such allocation period, or (ii) as a flat dollar amount (as determined by the Board of Directors or, if applicable, as specified by the applicable underlying collective bargaining agreement).

**4.4 ROLLOVERS AND TRANSFERS OF FUNDS FROM OTHER PLANS.** With the approval of the Administrator, there may be paid to the Trustee amounts which have been held under the following types of plans:

- (1) a qualified plan described in Section 401(a) or 403(a) of the Code, excluding after-tax employee contributions and excluding designated Roth contributions under Section 402A of the Code;
- (2) an annuity contract described in Section 403(b) of the Code, excluding after-tax employee contributions and excluding designated Roth contributions under Section 402A of the Code;
- (3) an eligible plan under Section 457(b) of the Code which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state, excluding after-tax employee contributions and excluding designated Roth contributions under Section 402A of the Code; and
- (4) an individual retirement account which was used solely as a conduit for a qualified plan described in Section 401(a) of the Code.

Any amounts rolled over on behalf of any Employee shall be nonforfeitable and shall be maintained under a separate Plan account. Any amounts transferred (not rolled over) on behalf of any Employee shall be maintained in accordance with procedures established by the Plan Administrator and applicable law. Amounts rolled over or transferred shall be paid in addition to amounts otherwise payable under this Plan. The amount of any such account shall be equal to the fair market value of such account as adjusted for income, expenses, gains, losses, and withdrawals attributable thereto.

**4.5** **TIMING OF CONTRIBUTIONS.** Employer contributions shall be made to the Plan no later than the time prescribed by law for filing the Employer's federal income tax return (including extensions) for its taxable year ending with or within the Plan Year. Elective deferrals under Section 4.1 or after-tax Employee contributions under Section 4.2 shall be paid to the Plan as soon as administratively possible, but no later than the fifteenth (15<sup>th</sup>) business day of the month following the month in which such deferrals would have been payable to the Participant in cash, or such later date as permitted or prescribed by the Department of Labor.

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## ARTICLE V-- ACCOUNTING RULES

### **5.1** INVESTMENT OF ACCOUNTS AND ACCOUNTING RULES.

(a) *Investment Funds.* The investment of Participants' Accounts shall be made in a manner consistent with the provisions of the Trust. In this regard, separate investment funds selected by the Committee shall be provided for the directed investment of each Participant's Account, including a separate Employer stock fund which is primarily invested in Minerals Technologies Inc. common stock, with a portion being invested in cash and cash equivalents for liquidity purposes. Any Employer matching contributions made on behalf of a Participant shall be initially invested in such Employer stock fund.

(b) *Participant Direction of Investments.* Each Participant (including, for this purpose, any former Employee, Beneficiary, or "alternate payee" (within the meaning of Section 14.4 below) with an Account balance) may direct how his Account (or such portion thereof which is subject to his investment direction) is to be invested among the available investment funds in the percentage multiples established by the Administrator. In the event a Participant fails to make an investment election, with respect to all or any portion of his Account subject to his investment direction, the Trustee shall invest all or such portion of his Account in the default investment fund designated by the Administrator. A Participant may change his investment election, with respect to future contributions and, if applicable, forfeitures, and/or amounts previously accumulated in the Participant's Account in accordance with procedures established by the Administrator. Any such change in a Participant's investment election shall be effective at such time as may be prescribed by the Administrator. However, where it deems appropriate, and subject to the requirements of applicable law, the Administrator may decline to implement, or otherwise limit the frequency by which a Participant may direct the investment of his Account. If the Plan's recordkeeper or investments are changed, the Administrator may apply such administrative rules and procedures as are necessary to provide for the transfer of records and/or assets, including without limitation, the suspension of Participant's investment directions, withdrawals and distributions for such period of time as is necessary, and the transfer of Participants' Accounts to designated funds or an interest bearing account until such change has been completed.

Notwithstanding the foregoing, if, pursuant to the provisions of the Trust, an investment manager (within the meaning of Section 3(38) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA")) is appointed by a named fiduciary pursuant to Section 402(c)(3) of ERISA, a Participant may elect to have such investment manager direct the investment of his Account in accordance with the provisions of the preceding paragraph.

(c) *Divestment of Employer Securities:* If any portion of a Participant's Account derived from his elective deferrals (within the meaning of Section 4.1) and/or after-tax contributions (under Section 4.2) is invested in publicly-traded employer securities (within the meaning of Section 407(d)(1) of the Employee Retirement Income Security Act of 1974), the Participant may direct the Trustee to divest such securities and to reinvest the proceeds in other investment options available under the Plan subject to the provisions of Code Section 401(a)(35), in accordance with rules and procedures established by the Administrator from time to time.

With respect to the portion of the Participant's Account derived from any Employer contributions made on his behalf under Sections 4.3 or 13.3 which is invested in publicly-traded employer securities, and/or with respect to any other contributions invested in Pfizer Inc. stock, a Participant (or a Beneficiary of any such Participant if deceased) may direct the Trustee to divest such securities and to reinvest the proceeds in other investment options available under the Plan subject to the provisions of Code Section 401(a)(35), in accordance with rules and procedures established by the Administrator from time to time.

(c)

Trust shall be valued at fair market value, and the income, loss, appreciation and depreciation (realized and unrealized), and any paid expenses of the Trust attributable to such fund shall be apportioned among Participants' Accounts within the fund based upon the value of each Account within the fund as of the preceding Valuation Date.

(d) *Allocation of Contributions.* Employer contributions shall be allocated to the Account of each eligible Participant as of the last day of the period for which the contributions are made, or as soon as administratively possible thereafter.

(e) *Manner and Time of Debiting Distributions.* For any Participant who is entitled to receive a distribution from his Account, such distribution shall be made in accordance with the provisions of Section 7.1 and Section 7.2. The amount distributed shall be based upon the fair market value of the Participant's vested Account as of the Valuation Date preceding the distribution.

**5.2 VOTING RIGHTS.** Any securities held in the investment funds, including the Employer stock fund (within the meaning of Section 5.1) and the Pfizer Inc. stock fund (within the meaning of Section 7.1) shall be voted in the manner provided in the Trust Agreement.

**5.3 PLAN EXPENSES.** The cost of administering the Plan and other Plan expenses shall be paid by the Trust in a nondiscriminatory manner specified by the Administrator, but if not paid by the Trust shall be paid by the Employer.

**5.4 ALLOCATION OF SERVICE CREDIT.** Any amounts deposited to the Plan by a service provider pursuant to an agreement between the Employer and the service provider ("Service Credit") shall be used to pay Plan administrative expenses. To the extent that the Service Credit for a calendar year exceeds the Plan administrative expenses incurred through March 31 (or prior business day) of the following calendar year, the excess (subject to such de minimis amount as may be established, which amount shall be used to pay future Plan administrative expenses) shall be allocated as of such March 31 (or the prior business day) to Participants with Account balances on such allocation date. The Account of each Participant eligible to receive such allocation shall be credited with an amount equal to the total excess Service Credit multiplied by a fraction, the numerator of which is the Participant's Account balance as of the date on which such allocation is made, and the denominator of which is the Account balances of all eligible Participants as of that date.

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## **ARTICLE VI-- VESTING**

**6.1 VESTING.** A Participant shall at all times have a nonforfeitable (vested) right to his Account derived from elective deferrals (within the meaning of Section 4.1), after-tax contributions (under Section 4.2), Employer matching contributions (previously made to the Plan), Employer Safe-Harbor Basic Matching Contributions (under Section 4.3(a)), Employer discretionary contributions (under Section 4.3(b)), Employer Fail-Safe Contributions, "Qualified Matching Contributions" (within the meaning of Section 10.2 below), and rollovers or transfers from other plans, as adjusted for investment experience.

**6.2 FORFEITURE OF NONVESTED BALANCE.** If a portion of a Participant's Account is not vested for any reason, for example, if an excess contribution is made by the Employer, the nonvested portion of the Participant's Account shall be forfeited as soon as administratively practical thereafter. The amount forfeited shall be used to pay Plan administrative expenses and/or used to reduce Employer contributions under the Plan.

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## **ARTICLE VII-- MANNER AND TIME OF DISTRIBUTING BENEFITS**

**7.1 MANNER OF PAYMENT.** The Participant's vested Account shall be distributed to the Participant (or to the Participant's Beneficiary in the event of the Participant's death) in a single lump-sum payment.

To the extent the Participant's Account is invested in the Employer stock fund (within the meaning of Section 5.1(a)) or in the "Pfizer stock fund", consisting of Pfizer Inc. common stock and cash and cash equivalents for liquidity purposes, the Participant (or Beneficiary in the event of the Participant's death) may elect to receive such portion of his Account in a single payment in (i) cash, or (ii) whole shares of stock, with any fractional shares and the cash and cash equivalent portions of the underlying stock fund being distributed in cash.

Notwithstanding the foregoing, but subject to the following provisions of this Article Seven, if the Participant's Account exceeds \$5,000, a Participant may also elect to receive partial payments of his Account.

**7.2 TIME OF COMMENCEMENT OF BENEFIT PAYMENTS.** If the Participant's Account exceeds \$5,000, the Participant can elect to receive distribution in accordance with Section 7.1 at any time after the Participant's separation from service with the Employer and all members of the Employer's related group (as defined in Section 2.4(b)).

If the Participant so elects, distribution of the Participant's Account shall be made or commence no later than the sixtieth (60) day after the later of the close of the Plan Year in which: (a) the Participant attains age sixty-five (65) (or Normal Retirement Date, if earlier), (b) occurs the ten (10<sup>th</sup>) anniversary of the year in which the Participant commenced participation in the Plan, or (c) the Participant severs employment with the Employer.

Notwithstanding the foregoing, a Participant's Account may be frozen to prevent the Participant from taking withdrawals, loans and/or distributions from his Account in accordance with the Plan's qualified domestic relations order procedures.

Moreover, if the Participant's vested Account does not exceed \$5,000, the Participant's entire vested Account shall be normally distributed to the Participant (or, in the event of the Participant's death, his Beneficiary) in a lump-sum payment as soon as administratively practicable following the date the Participant retires, dies or otherwise terminates employment with the Employer and all members of the Employer's related group (as defined in Section 2.4(b)). However, in the event of a mandatory distribution to a Participant whose vested Account is greater than \$1,000, if the Participant does not elect to have such automatic distribution paid directly to an eligible retirement plan specified by the Participant in a direct rollover or to receive the distribution directly in accordance with Section 7.1, then the Plan Administrator shall pay the distribution in a direct rollover to an individual retirement plan designated by the Plan Administrator.

In no event shall distribution of the Participant's vested Account be made or commence later than the April 1st following the end of the calendar year in which the Participant attains age seventy and one-half (70½), or, except for a Participant who is a five percent (5%) owner of the Employer (within the meaning of Section 401(a)(9)(C) of the Code), if later, the April 1st following the calendar year in which the Participant retires from employment with the Employer (the "required beginning date").

**7.3 FURNISHING INFORMATION.** Prior to the payment of any benefit under the Plan, each Participant or Beneficiary may be required to complete such administrative forms and furnish such proof as may be deemed necessary or appropriate by the Employer, Administrator, and/or Trustee.

## **7.4 MINIMUM DISTRIBUTION REQUIREMENTS.**

### **(a) *General Rules.***

(1) Effective Date. The provisions of this Article will apply for purposes of determining required minimum distributions.

(2) Precedence. The requirements of this Article shall take precedence over any inconsistent provisions of the Plan; provided, however, that this Article shall not require the Plan to provide any form of benefit, or any option, not otherwise provided under Section 7.1.

(3) Requirements of Treasury Regulations Incorporated. All distributions required under this Article will be determined and made in accordance with the Treasury regulations under Section 401(a)(9) of the Code and the minimum distribution incidental benefit requirement of Section 401(a)(9)(G) of the Code.

### **(b) *Time and Manner of Distribution***

(1) Required Beginning Date. The Participant's vested Account shall be distributed, or begin to be distributed, to the Participant no later than the Participant's required beginning date.

(2) Death of Participant Before Distributions Begin. If the Participant dies before distributions begin, the Participant's vested Account shall be distributed, or begin to be distributed, no later than as follows:

(A) If the Participant's surviving spouse is the Participant's sole designated Beneficiary, distribution of the Participant's entire vested account shall be completed by the December 31 of the calendar year containing the fifth anniversary of the Participant's death unless the surviving spouse Beneficiary elects to begin distribution over his life or over a period certain not exceeding his life expectancy (if permitted under Section 7.1 of the Plan) or in a lump sum payment by December 31 of the calendar year immediately following the calendar year in which the Participant died, or by December 31 of the calendar year in which the Participant would have attained age 70½, if later.

(B) If the Participant's surviving spouse is not the Participant's sole designated Beneficiary, distribution of the Participant's entire vested account shall be completed by the December 31 of the calendar year containing the fifth anniversary of the Participant's death unless the designated Beneficiary elects to begin distribution over his life or over a period certain not exceeding his life expectancy (if permitted under Section 7.1 of the Plan) by December 31 of the calendar year immediately following the calendar year in which the Participant died.

(C) If there is no designated Beneficiary as of September 30 of the year following the year of the Participant's death, the Participant's entire interest shall be distributed by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

(D) If the Participant's surviving spouse is the Participant's sole designated Beneficiary and the surviving spouse dies after the Participant but before distributions to the surviving spouse begin, this Section 7.4(b), other than Section 7.4(b)(2)(A), shall apply as if the surviving spouse were the Participant.

For purposes of Sections 7.4(b) and 7.4(d), unless Section 7.4(b)(2)(D) applies, distributions are considered to begin on the Participant's required beginning date. If Section 7.4(b)(2)(D) applies, distributions are considered to begin on the date distributions are required to begin to the surviving spouse under Section 7.4(b)(2)(A).

If distributions under an annuity purchased from an insurance company irrevocably commence to the Participant before the Participant's required beginning date (or to the Participant's surviving spouse before the date distributions are required to begin to the



surviving spouse under Section 7.4(b)(2)(A)), the date distributions are considered to begin is the date distributions actually commence.

(3) Forms of Distribution. Unless the Participant's interest is distributed in the form of an annuity purchased from an insurance company or in a single sum on or before the required beginning date, as of the first distribution calendar year, distributions shall be made in accordance with Sections 7.4(c) and (d). If the Participant's interest is distributed in the form of an annuity purchased from an insurance company, distributions thereunder shall be made in accordance with the requirements of Section 401(a)(9) of the Code and the Treasury regulations.

(c) ***Required Minimum Distributions During Participant's Lifetime.***

(1) Amount of Required Minimum Distribution for Each Distribution Calendar Year. During the Participant's lifetime, the minimum amount that shall be distributed for each distribution calendar year is the lesser of:

(A) the quotient obtained by dividing the Participant's vested Account balance by the distribution period in the Uniform Lifetime Table set forth in Section 1.401(a)(9)-9, Q&A-2, of the Treasury Regulations, using the Participant's age as of the Participant's birthday in the distribution calendar year; or

(B) if the Participant's sole designated Beneficiary for the distribution calendar year is the Participant's spouse, the quotient obtained by dividing the Participant's vested Account balance by the number in the Joint and Last Survivor Table set forth in Section 1.401(a)(9)-9, Q&A-3, of the Treasury Regulations, using the Participant's and spouse's attained ages as of the Participant's and spouse's birthdays in the distribution calendar year.

(2) Lifetime Required Minimum Distributions Continue Through Year of Participant's Death. Required minimum distributions shall be determined under this Section 7.4(c) beginning with the first distribution calendar year and up to and including the distribution calendar year that includes the Participant's date of death.

(d) ***Required Minimum Distributions After Participant's Death.***

(1) Death On or After Date Distributions Begin.

(A) Participant Survived by Designated Beneficiary. Subject to the provisions of this Article, if the Participant dies on or after the date distributions begin and there is a designated Beneficiary, the minimum amount that shall be distributed for each distribution calendar year after the year of the Participant's death is the quotient obtained by dividing the Participant's vested Account balance by the longer of the remaining life expectancy of the Participant or the remaining life expectancy of the Participant's designated Beneficiary, determined as follows:

(i) The Participant's remaining life expectancy is calculated using the age of the Participant in the year of death, reduced by one for each subsequent year.

(ii) If the Participant's surviving spouse is the Participant's sole designated Beneficiary, the remaining life expectancy of the surviving spouse is calculated for each distribution calendar year after the year of the Participant's death using the surviving spouse's age as of the spouse's birthday in that year. For distribution calendar years after the year of the surviving spouse's death, the remaining life expectancy of the surviving spouse is calculated using the age of the surviving spouse as of the spouse's birthday in the calendar year of the spouse's death, reduced by one for each subsequent calendar year.

(iii) If the Participant's surviving spouse is not the Participant's sole designated Beneficiary, the designated Beneficiary's remaining life expectancy is calculated using the age of the Beneficiary in the year following the year of the Participant's

death, reduced by one for each subsequent year.

(B) *No Designated Beneficiary*. If the Participant dies on or after the date distributions begin and there is no designated Beneficiary as of September 30 of the year after the year of the Participant's death, the minimum amount that shall be distributed for each distribution calendar year after the year of the Participant's death is the quotient obtained by dividing the Participant's vested Account balance by the Participant's remaining life expectancy calculated using the age of the Participant in the year of death, reduced by one for each subsequent year.

(2) Death Before Date Distributions Begin.

(A) *Participant Survived by Designated Beneficiary*. If the Participant dies before the date distributions begin and there is a designated Beneficiary, the minimum amount that shall be distributed for each distribution calendar year after the year of the Participant's death is the quotient obtained by dividing the Participant's vested Account balance by the remaining life expectancy of the Participant's designated Beneficiary, determined as provided in Section 7.4(d)(1).

(B) *No Designated Beneficiary*. If the Participant dies before the date distributions begin and there is no designated Beneficiary as of September 30 of the year following the year of the Participant's death, distribution of the Participant's entire interest shall be completed by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

(C) *Death of Surviving Spouse Before Distributions to Surviving Spouse Are Required to Begin*. If the Participant dies before the date distributions begin, the Participant's surviving spouse is the Participant's sole designated Beneficiary, and the surviving spouse dies before distributions are required to begin to the surviving spouse under Section 7.4(b)(2)(A), this Section 7.4(d) shall apply as if the surviving spouse were the Participant.

(e) **Definitions.**

(1) Designated Beneficiary. The individual who is designated as the Beneficiary under Section 7.6 of the Plan and is the designated Beneficiary under Section 401(a)(9) of the Code and Section 1.401(a)(9)-4, of the Treasury Regulations.

(2) Distribution Calendar Year. A calendar year for which a minimum distribution is required. For distributions beginning before the Participant's death, the first distribution calendar year is the calendar year immediately preceding the calendar year which contains the Participant's required beginning date. For distributions beginning after the Participant's death, the first distribution calendar year is the calendar year in which distributions are required to begin under Section 7.4(b)(2). The required minimum distribution for the Participant's first distribution calendar year shall be made on or before the Participant's required beginning date. The required minimum distribution for other distribution calendar years, including the required minimum distribution for the distribution calendar year in which the Participant's required beginning date occurs, shall be made on or before December 31 of that distribution calendar year.

(3) Life Expectancy. Life expectancy as computed by use of the Single Life Table in Section 1.401(a)(9)-9, Q&A-1, of the Treasury Regulations.

(4) Participant's Vested Account Balance. The vested Account balance as of the last valuation date in the calendar year immediately preceding the distribution calendar year (valuation calendar year) increased by the amount of any contributions made and allocated or forfeitures allocated to the vested Account balance as of dates in the valuation calendar year after the valuation date and decreased by distributions made in the valuation calendar year after the valuation date. The vested Account balance for the valuation calendar year includes any amounts rolled over or transferred to the Plan either in the valuation calendar year or in the distribution calendar year if distributed or transferred in the valuation calendar

year.

(5) Required Beginning Date. The date specified in Section 7.2 of the Plan.

**(f) *Special Rules for Required Minimum Distributions During 2009***

For purposes of this subsection, a "2009 RMD" is the required minimum distribution a Participant or Beneficiary, as applicable, is required to receive for 2009 without regard to Section 401(a)(9)(H) of the Code. In this regard, a Participant or Beneficiary whose initial required minimum distribution is a 2009 RMD shall not receive distribution of his 2009 RMD unless he elects otherwise in accordance with procedures established by the Administrator.

A Participant or Beneficiary whose 2009 RMD is not his initial required minimum distribution shall receive his 2009 RMD unless he elects to suspend his 2009 RMD in accordance with procedures established by the Administrator.

A direct rollover will be offered only for distributions that would be eligible rollover distributions without regard to Code Section 401(a)(9)(H).

The provisions of this subsection (f) shall be interpreted in accordance with Code Section 401(a)(9)(H) and regulatory guidance issued thereunder.

**7.5 AMOUNT OF DEATH BENEFIT.**

(a) Death Before Termination of Employment. In the event of the death of a Participant while in the employ of the Employer or a member of the Employer's related group (as defined in Section 2.4(b)), vesting in the Participant's Account shall be one hundred percent (100%), if not otherwise one hundred percent (100%) vested under Section 6.1, with the credit balance of the Participant's Account being payable to his Beneficiary.

(b) Death After Termination of Employment. In the event of the death of a former Participant after termination of employment, but prior to the complete distribution of his vested Account balance under the Plan, the undistributed vested balance of the Participant's Account shall be paid to the Participant's Beneficiary.

**7.6 DESIGNATION OF BENEFICIARY.** Each Participant shall designate a Beneficiary in a manner acceptable to the Administrator to receive payment of any death benefit payable hereunder if such Beneficiary should survive the Participant. However, no Participant who is married shall be permitted to designate a Beneficiary other than his spouse, unless the Participant's spouse has signed a written consent, witnessed by a notary public, which provides for the designation of an alternate Beneficiary.

Subject to the above, Beneficiary designations may include primary and contingent Beneficiaries, and may be revoked or amended at any time in similar manner or form, and the most recent designation shall govern. A designation of a Beneficiary made by a Participant shall cease to be effective upon his marriage or remarriage. In addition, a spousal Beneficiary designation shall cease to be effective upon written notification to the Administrator of the divorce of the Participant and such spouse. In the absence of an effective designation of Beneficiary, or if no designated Beneficiary is surviving as of the date of the Participant's death, any death benefit shall be paid to the surviving spouse of the Participant, or, if no surviving spouse, to the Participant's estate. Notification to Participants of the death benefits under the Plan and the method of designating a Beneficiary shall be given at the time and in the manner provided by regulations and rulings under the Code.

In the event a Beneficiary survives the Participant, but dies before receipt of all payments due that Beneficiary hereunder, any benefits remaining to be paid to the Beneficiary shall be paid to the Beneficiary's estate.

## **7.7 DISTRIBUTION OF DEATH BENEFIT.**

(a) If a Participant dies before receiving a complete distribution of his Account, then upon the Participant's death, the Participant's remaining Account shall be distributed to the Participant's Beneficiary in accordance with the provisions of this Section 7.7.

(b) If the Beneficiary is not the Participant's surviving spouse, then the Beneficiary must take a complete distribution of the Participant's Account by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

(c) If the Beneficiary is the Participant's surviving spouse, then the Beneficiary must take a complete distribution of the Participant's Account by the latest of (i) December 31 of the calendar year containing the fifth anniversary of the Participant's death, (ii) December 31 of the calendar year following the year of the Participant's death, and (iii) December 31 of the calendar year in which the Participant would have attained age seventy and one-half (70½).

## **7.8 ELIGIBLE ROLLOVER DISTRIBUTIONS.** Notwithstanding the foregoing provisions of this Article Seven, the provisions of this Section 7.8 shall apply to distributions made under the Plan.

(a) A "distributee" (as hereinafter defined) may elect, at the time and in the manner prescribed by the Administrator, to have any portion of an "eligible rollover distribution" (as hereinafter defined) paid directly to an eligible retirement plan specified by the distributee in a direct rollover.

(b) Definitions:

(i) Eligible Rollover Distribution. An eligible rollover distribution is any distribution of all or any portion of the balance to the credit of the distributee, except that an eligible rollover distribution does not include: any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or life expectancy) of the distributee or the joint lives (or joint life expectancies) of the distributee and the distributee's designated Beneficiary, or for a specified period of ten (10) years or more; any distribution to the extent such distribution is required under Section 401(a)(9) of the Code; and any hardship distribution described in Section 8.2. A portion of a distribution shall not fail to be an eligible rollover distribution merely because the portion consists of after-tax employee contributions which are not includible in gross income. However, such portion may be transferred only to (1) a traditional individual retirement account or annuity described in Section 408(a) or (b) of the Code (a "traditional IRA") or a Roth individual retirement account or annuity described in Section 408A of the Code (a "Roth IRA"); or (2) to a qualified plan or an annuity contract described in Section 401(a) and 403(b) of the Code, respectively, that agrees to separately account for amounts so transferred (and earnings thereon), including separately accounting for the portion of such distribution which is includible in gross income and the portion of such distribution which is not so includible.

(ii) Eligible Retirement Plan. An eligible retirement plan is an eligible plan under Section 457(b) of the Code which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state and which agrees to separately account for amounts transferred into such plan from this Plan, a traditional IRA, a Roth IRA, an annuity plan described in Section 403(a) of the Code, an annuity contract described in Section 403(b) of the Code, or a qualified plan described in Section 401(a) of the Code, that accepts the distributee's eligible rollover distribution. The definition of eligible retirement plan shall also apply in the case of a distribution to a surviving spouse, or to a spouse or former spouse who is the alternate payee under a qualified domestic relations order, as defined in Section 414(p) of the Code.

If any portion of an eligible rollover distribution is attributable to payments or distributions from a designated Roth account, an eligible retirement plan with respect

to such portion shall include only another designated Roth account of the individual from whose account the payments or distributions were made, or a Roth IRA of such individual.

(iii) Distributee. A distributee includes an Employee or former Employee. In addition, the Employee's or former Employee's surviving spouse, and the Employee's or former Employee's spouse or former spouse who is an alternate payee under a qualified domestic relations order, as defined in Section 414(p) of the Code, are distributees with regard to the interest of the spouse or former spouse. For distributions after December 31, 2007, a distributee includes the Employee's or former Employee's non-spouse designated Beneficiary, in which case, the distribution can only be transferred to a traditional or Roth inherited IRA established on behalf of the non-spouse designated Beneficiary for the purpose of receiving the distribution.

(iv) Direct Rollover. A direct rollover is a payment by the Plan to the eligible retirement plan specified by the distributee.

(c) If a distribution is one to which Sections 401(a)(11) and 417 of the Code do not apply, such distribution may commence less than thirty (30) days after the notice required under Section 1.411(a)-11(c) of the Treasury Regulations is given, provided that:

(i) the Administrator clearly informs the Participant that the Participant has a right to a period of at least thirty (30) days after receiving the notice to consider the decision of whether or not to elect a distribution (and, if applicable, a particular distribution option), and

(ii) the Participant, after receiving the notice, affirmatively elects a distribution.

(d) For any distribution notice issued in Plan Years beginning after December 31, 2006, the description of a Participant's right, if any, to defer distribution shall also describe the consequences of failing to defer receipt of the distribution in accordance with the requirements of applicable law. In addition, any reference to the ninety (90) day maximum notice period prior to distribution in applying the notice requirements of Code Sections 402(f), 411(a)(11) and 417 shall become one hundred and eighty (180) days.

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## ARTICLE VIII-- LOANS AND IN-SERVICE WITHDRAWALS

### **8.1** LOANS.

(a) Permissible Amount and Procedures. Upon the application of an active Participant, the Administrator may, in accordance with a uniform and nondiscriminatory policy, direct the Trustee to grant a loan to the Participant, which loan shall be secured by the Participant's vested Account balance. The Participant's signature shall be required on a promissory note. The rate of interest on any such loan shall be equal to the "Prime Rate" (as reported in *The Wall Street Journal* on the date the loan is initiated) plus one percent 1%. Participant loans shall be treated as segregated investments, and interest repayments shall be credited only to the Participant's Account. Provided, however, that only Participants who are Employees or "parties in interest" (within the meaning of Section 3(14) of the Employee Retirement Income Security Act of 1974) are permitted to initiate loans. Further provided, the provisions of this Section 8.1 shall not apply to Participants who are members of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521, at Minteq International, Inc., Dover Ohio plant. In addition, a Participant may only have one (1) loan outstanding at any time, including any defaulted loans.

(b) Limitation on Amount of Loans. A Participant's loan shall not exceed the lesser of:

(1) \$50,000, which amount shall be reduced by the highest outstanding loan balance during the preceding twelve (12)-month period; or

(2) one-half ( $\frac{1}{2}$ ) of the vested value of the Participant's Account, determined as of the Valuation Date preceding the date of the Participant's loan.

Any loan must be repaid within five (5) years (or such longer period permitted by law), unless made for the purpose of acquiring the primary residence of the Participant, in which case such loan may be repaid over a longer period of time not to exceed fifteen (15) years. The repayment of any loan must be made in at least quarterly installments of principal and interest; provided, however, that this requirement shall not apply for a period, not longer than one year, or such longer period as may apply under Section 414(u) of the Code, that a Participant is on a leave of absence ("Leave"), either without pay from the Employer or at a rate of pay (after income and employment tax withholding) that is less than the amount of the installment payments required under the terms of the loan. However, the loan must be repaid by the latest date permitted under Sections 72(p)(2)(B) and 414(u) of the Code and the installments due after the Leave ends (or, unless Section 414(u) of the Code applies, if earlier, upon the expiration of the first year of the Leave) must not be less than those required under the terms of the original loan.

If a Participant defaults on any outstanding loan, the unpaid balance, and any interest due thereon, shall become due and payable in accordance with the terms of the underlying promissory note; provided, however, that such foreclosure on the promissory note and attachment of security shall not occur until a distributable event occurs in accordance with the provisions of Article Seven.

If a Participant terminates employment while any loan balance is outstanding, the unpaid balance, and any interest due thereon, shall become due and payable in accordance with the terms of the underlying promissory note; provided, however, that any outstanding loan may, under certain circumstances, be rolled over to a qualified plan. Any such rollover, if permitted, shall be made in accordance with rules and procedures established by the Administrator. If such amount is not paid to the Plan, it shall be charged against the amounts that are otherwise payable to the Participant or the Participant's Beneficiary under the provisions of the Plan.

In the case of a Participant who has loans outstanding from other plans of the Employer (or a member of the Employer's related group (within the meaning of Section 2.4(b)), all such loans shall

be aggregated for purposes of complying with the limits of Section 72(p) of the Code.

**8.2 HARDSHIP DISTRIBUTIONS.** In the case of a financial hardship resulting from a proven immediate and heavy financial need, an actively employed Participant may receive a distribution not to exceed the lesser of (i) the vested value of the Participant's Account, without regard to earnings received on elective deferrals (within the meaning of Section 4.1) after December 31, 1988, and without regard to any Fail-Safe Contributions, Employer Safe-Harbor Basic Matching Contributions under Section 4.3(a) and Qualified Matching Contributions (within the meaning of Section 10.2 below), or (ii) the amount necessary to satisfy the financial hardship. The amount of any such immediate and heavy financial need may include any amounts necessary to pay Federal, state or local income taxes reasonably anticipated to result from the distribution. Such distribution shall be made in accordance with nondiscriminatory and objective standards and procedures consistently applied by the Administrator. For purposes of this Section, an actively employed Participant shall include an Employee who has severed employment with the Employer but is still employed by a member of the Employer's related group (as defined in Section 2.4(b)) and who has an Account under the Plan.

Hardship distributions under this Section shall be deemed to be the result of an immediate and heavy financial need if such distribution is to: (a) pay expenses for (or to obtain) medical care that would be deductible under Section 213(d) of the Code determined without regard to whether the expenses exceed seven and one-half percent (7.5%) of adjusted gross income; (b) purchase the principal residence of the Participant (excluding mortgage payments); (c) pay tuition and related educational fees for the next twelve (12) months of post-secondary education for the Participant, Participant's spouse, or any of the Participant's dependents (as defined in Section 152 of the Code, and without regard to Section 152(b)(1), (b)(2) and (d)(1)(B) of the Code); (d) prevent the eviction of the Participant from his principal residence or foreclosure on the Participant's principal residence; (e) pay funeral or burial expenses for the Participant's deceased parent, spouse, children or dependents (as defined in Section 152 of the Code, and without regard to Section 152(d)(1)(B) of the Code); or (f) repair damage to the Participant's principal residence that would qualify for a casualty loss deduction under Section 165 of the Code (determined without regard to whether the loss exceeds ten percent (10%) of adjusted gross income). Distributions paid pursuant to this Section shall be deemed to be made as of the Valuation Date immediately preceding the hardship distribution, and the Participant's Account shall be reduced accordingly.

A distribution shall not be treated as necessary to satisfy an immediate and heavy financial need of a Participant to the extent the amount of the distribution is in excess of the amount required to relieve the financial need or to the extent the need may be satisfied from other resources that are reasonably available to the Participant. This determination shall generally be made on the basis of all relevant facts and circumstances. For purposes of this paragraph, the Participant's resources shall be deemed to include those assets of the Participant's spouse and minor children that are reasonably available to the Participant. A distribution generally shall be treated as necessary to satisfy a financial need if the Administrator relies upon the Participant's written representation, unless the Administrator has actual knowledge to the contrary, that the need cannot reasonably be relieved:

- (1) Through reimbursement or compensation by insurance or otherwise;
- (2) By liquidation of the Participant's assets;
- (3) By cessation of elective deferrals (within the meaning of Section 4.1) and any after-tax contributions under Section 4.2; or
- (4) By other distributions or nontaxable (at the time of the loan) loans from plans maintained by the Employer or by any other employer, or by borrowing from commercial sources on reasonable commercial terms, in an amount sufficient to satisfy the need.

For purposes of the foregoing paragraph, a need cannot reasonably be relieved by one of the actions listed above if the effect would be to increase the amount of the need. In making such determination, the Administrator may rely upon the Participant's written representation to such effect, unless the Administrator has actual knowledge to the contrary.

**8.3 WITHDRAWALS AFTER AGE 59½.** After attaining age fifty-nine and one-half (59½), an actively employed Participant may withdraw from the Plan a sum (a) not in excess of the credit balance of his vested Account and (b) not less than such minimum amount as the Administrator may establish from time to time to facilitate administration of the Plan. Any such withdrawals shall be made in accordance with nondiscriminatory and objective standards and procedures consistently applied by the Administrator. To the extent the Participant's Account is invested in the Employer stock fund (within the meaning of Section 5.1(a) or the Pfizer stock fund (within the meaning of Section 7.1), the withdrawal may be made in the form of whole shares of stock, with any fractional shares and the cash and cash equivalent portions of the underlying stock fund being withdrawn in cash. For purposes of this Section, an actively employed Participant shall include an Employee who has severed employment with the Employer but is still employed by a member of the Employer's related group (as defined in Section 2.4(b)) and who has an Account under the Plan.

**8.4 NON-HARDSHIP WITHDRAWALS.** Before attaining age fifty-nine and one-half (59½), a Participant, who is an Employee may, by notice to the Administrator, withdraw from the Plan a sum (a) not in excess of the credit balance of the Participant's Account attributable to any after-tax contributions made to the Plan, including earnings thereon, any rollover contributions, including earnings thereon, and, except as provided herein below, any Employer matching contributions previously made under the Plan or Employer discretionary contributions made pursuant to Section 4.3(b) that have been credited to his Account for at least two (2) years, (or, provided at least five (5) years have elapsed since his initial date of Plan participation, all such matching or discretionary contributions credited to his Account), including earnings thereon, and (b) not less than such minimum amount as the Administrator may establish from time to time to facilitate administration of the Plan. Any such withdrawals shall be made in accordance with nondiscriminatory and objective standards consistently applied by the Administrator. However, the amount available for withdrawal shall exclude any Employer Safe-Harbor Basic Matching Contributions made pursuant to Section 4.3(a) and any Qualified Matching Contributions (within the meaning of Section 10.2) and any earnings thereon.

**8.5 HEART ACT PROVISIONS.**

(a) Death benefits. In the case of a Participant's death occurring on or after January 1, 2007, if a Participant dies while performing qualified military service (as defined in Code Section 414(u)), the Beneficiary(ies) (or surviving spouse, if the qualified joint and survivor annuity or qualified pre-retirement survivor annuity rules apply) of the Participant shall be entitled to any additional benefits (other than benefit accruals relating to the period of qualified military service) provided under the Plan as if the Participant had resumed employment and then terminated employment on account of death. In addition, vesting service credit for the deceased Participant's period of qualified military service shall be credited to the extent required by Code Section 401(a)(37).

(b) Differential wage payments. For years beginning after December 31, 2008, (i) a Participant receiving a differential wage payment, as defined by Code Section 3401(h)(2), shall be treated as an Employee of the Employer making the payment, (ii) the differential wage payment shall be treated as Compensation, and (iii) the Plan shall not be treated as failing to meet the requirements of any provision described in Code Section 414(u)(1)(C) by reason of any contribution or benefit which is based on the differential wage payment.

(c) Severance from employment. For years beginning after December 31, 2008 and for purposes of Code Section 401(k)(2)(B)(i)(I), an individual shall be treated as having severed from employment during any period the individual is performing service in the uniformed services described in Code Section 3401(h)(2)(A).

If a Participant elects to receive a distribution by reason of such severance from employment, the Participant may not make an elective deferral or employee contribution during the six (6)-month period or such other period as required by law beginning on the date of such distribution.

Effective as of the dates specified above, the provisions of this Section 8.5 shall be interpreted consistent with, and governed by, the Heroes Earnings Assistance and Relief Tax Act of 2008 ("HEART Act") and regulatory guidance issued thereunder.

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## **ARTICLE IX-- ADMINISTRATION OF THE PLAN**

**9.1 PLAN ADMINISTRATION.** The Plan shall be administered by a Savings and Investment Plan Committee (the "Committee") consisting of at least three (3) persons, who may be Participants of the Plan, appointed by the Board of Directors of Minerals Technologies Inc. (the "Board"). Members of the Committee shall serve at the pleasure of the Board, and may resign at any time upon due notice in writing. The Committee shall act by a majority of its members, and the secretary thereof shall certify its action to the Trustee.

The Committee shall be the Plan Administrator and shall have fiduciary responsibility under the Employee Retirement Income Security Act of 1974, as amended, for the general operation of the Plan, and the exclusive authority and responsibility (i) to appoint and remove or select investment managers, if any, the Trustee or any successor Trustee under the Plan and the Trust and pooled investment vehicles and investment advisers thereof, (ii) to direct the segregation of all or a portion of the assets of the Trust into an investment manager account or accounts at any time and from time to time and to add or to withdraw assets from such investment manager account or accounts as it deems desirable or appropriate, (iii) to direct the Trustee to enter into a group annuity contract or contracts, in such form and on such terms as may be approved by the Committee to provide for annuity settlements under the Plan, and (iv) to direct the Trustee to enter into one (1) or more investment contracts with one or more insurance companies or financial institutions. The Committee may appoint or employ, and compensate such persons as it deems necessary to render advice with respect to any responsibility of the Committee under the Plan. The Committee may allocate to any one (1) or more of its members any responsibility that it may have under the Plan and may designate any other person or persons to carry out any responsibility of the Committee under the Plan. Any person may serve in more than one fiduciary capacity with respect to the Plan.

The Committee shall administer the Plan in accordance with its terms and shall have all powers necessary to carry out the provisions of the Plan not otherwise reserved to the Employer, the Board or the Trustee. The Committee shall have total and complete discretion to interpret the Plan and to determine all questions arising in the administration, interpretation and application of the Plan, including the power to construe and interpret the Plan; to decide questions relating to an individual's eligibility to participate in the Plan and/or eligibility for benefits and the amounts thereof; to have fact finder discretionary authority to decide all facts relevant to the determination of eligibility for benefits or participation; to make such adjustments as it deems necessary or desirable to correct any arithmetical or accounting errors; to determine the amount, form, and timing of any distribution to be made hereunder; to approve and enforce any loan hereunder including the repayment thereof; to resolve any conflict among Plan terms; and to establish any limitation or procedures relating to Participant investment allocations, distributions, and other Plan activities necessary to ensure compliance with the Employer's insider trading policy and any applicable securities laws. The Committee shall have the discretion to make factual determinations relating to the amount and manner of any allocations and distributions of benefits. In making its decisions, the Committee shall be entitled to, but need not rely upon, information supplied by a Participant, Beneficiary or representative thereof. The Committee may correct any defect, supply any omission or reconcile any inconsistency in such manner and to such extent as it shall deem necessary to carry out the purposes of the Plan. The Committee's decision in such matters shall be binding and conclusive as to all parties.

The Committee is authorized to make such uniform rules as may be necessary to carry out the provisions of the Plan and shall determine, in its sole discretion, any questions arising in the administration, interpretation and application of the Plan, which determination shall be conclusive and binding on all parties. In exercising such powers and authorities, the Committee shall at all times exercise good faith, apply standards of uniform application, and refrain from arbitrary action. The Committee is also authorized to adopt such uniform rules as it may consider necessary or desirable for the conduct of its affairs and the transaction of its business, including, but not limited

to, the power on the part of the Committee to act without formally convening and to provide that action of the Committee may be expressed by written instruments signed by a majority of its members. It shall elect a secretary, who need not be a member of the Committee, who shall record the minutes of its proceedings and shall perform such other duties as may from time to time be assigned to him. The Committee may retain legal counsel (who may be the General Counsel or Assistant General Counsel of Minerals Technologies Inc.) when and if it be found necessary or convenient to do so, and may also employ such other assistants, clerical or otherwise, as may be needed, and expend such monies as may be required for the proper performance of its work. Such costs and expenses shall be borne by the Employer.

To the extent permitted by law, the Committee, the Board, the Employer, and their respective officers, shall not be liable for the directions, actions or omissions of any agent, legal or other counsel, accountant or any other expert who has agreed to the performance of administrative duties in connection with the Plan or Trust. The Committee, the Board, and the Employer, and their respective officers, shall be entitled to rely upon all certificates, reports, data, statistics, analyses and opinions which may be made by such experts and shall be fully protected in respect to any action taken or suffered by them in good faith reliance upon any such certificates, reports, data, statistics, analyses or opinions; all actions so taken or suffered shall be conclusive upon each of them and upon all persons having or claiming to have any interest in or under the Plan.

Each member of the Committee shall be indemnified the by the Employer against all costs and expenses (including counsel fees, but excluding any amount representing a settlement unless such settlement be approved by the Employer) reasonably incurred by or imposed upon him in connection with or resulting from any action, suit or proceeding to which he may be made a party by reason of his being or having been a member of the Committee (whether or not he continues to be a member of the Committee at the time when such cost or expense is incurred or imposed), to the full extent of the law. The foregoing rights of indemnification shall not be exclusive of other rights to which any member of the Committee may be entitled as a matter of law, contract or otherwise.

## **9.2 CLAIMS PROCEDURE.**

(a) Pursuant to procedures established by the Administrator, claims for benefits under the Plan made by a Participant or Beneficiary (the "claimant") must be submitted in writing to the Plan Representative identified by the Administrator. Approved claims shall be processed and instructions issued to the Trustee or custodian authorizing payment as claimed.

If a claim is denied in whole or in part, the Plan Representative shall notify the claimant within ninety (90) days after receipt of the claim (or within one hundred eighty (180) days, if special circumstances require an extension of time for processing the claim, and provided written notice indicating the special circumstances and the date by which a final decision is expected to be rendered is given to the claimant within the initial ninety (90) day period).

The notice of the denial of the claim shall be written in a manner calculated to be understood by the claimant and shall set forth the following:

- (i) the specific reason or reasons for the denial of the claim;
- (ii) the specific references to the pertinent Plan provisions on which the denial is based;
- (iii) a description of any additional material or information necessary to perfect the claim, and an explanation of why such material or information is necessary;
- (iv) a statement that any appeal of the denial must be made by giving to the Administrator, within sixty (60) days after receipt of the denial of the claim, written notice of such appeal, such notice to include a full description of the pertinent issues and basis of the claim; and
- (v) a statement about the claimant's right to bring civil action under Section 502(a) under ERISA if the claim is denied on review.

Upon denial of a claim in whole or part, the claimant (or his duly authorized representative) shall have the right to submit a written request to the Administrator for a full and fair review of the denied claim, to be permitted to review documents (free of charge) pertinent to the denial, and to submit issues and comments in writing. Any appeal of the denial must be given to the Administrator within the period of time prescribed under (a)(iv) above. If the claimant (or his duly authorized representative) fails to appeal the denial to the Administrator within the prescribed time, the Administrator's adverse determination shall be final, binding and conclusive.

The Administrator may hold a hearing or otherwise ascertain such facts as it deems necessary and shall render a decision which shall be binding upon both parties. The Administrator shall advise the claimant of the results of the review within sixty (60) days after receipt of the written request for the review, unless special circumstances require an extension of time for processing, in which case a decision shall be rendered as soon as possible but not later than one hundred twenty (120) days after receipt of the request for review. If such extension of time is required, written notice of the extension shall be furnished to the claimant prior to the commencement of the extension. The decision of the review shall be written in a manner calculated to be understood by the claimant and shall include specific reasons for the decision, specific references to the pertinent Plan provisions on which the decision is based, the claimant's right to receive free of charge upon written request, reasonable access to and copies of, all Plan documents, records, and other information relevant to the claim, and a statement about the claimant's right to bring a civil action under Section 502(a) of ERISA. The decision of the Administrator shall be final, binding and conclusive. Employees must pursue all claims procedures described herein before seeking any other legal recourse with respect to Plan benefits. In addition, any lawsuit must be filed within six months from the date of the denied appeal.

**9.3 TRUST AGREEMENT.** The Trust Agreement entered into by and between Minerals Technologies Inc. and the Trustee, including any supplements or amendments thereto, or any successor Trust Agreement, is incorporated by reference herein.

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## ARTICLE X-- SPECIAL COMPLIANCE PROVISIONS

**10.1 DISTRIBUTION OF EXCESS ELECTIVE DEFERRALS.** Notwithstanding any other provision of the Plan, "Excess Elective Deferrals" (as defined below) (and income or loss allocable thereto, including all earnings, expenses and appreciation or depreciation in value, whether or not realized) shall be distributed (no later than each April 15) to Participants who claim Excess Elective Deferrals for the preceding calendar year.

"Excess Elective Deferrals" shall mean the amount of Elective Deferrals (as defined below) for a calendar year that the Participant designates to the Plan pursuant to the following procedure. The Participant's designation: shall be submitted to the Administrator in writing no later than March 1; shall specify the Participant's Excess Elective Deferrals for the preceding calendar year; and shall be accompanied by the Participant's written statement that if the Excess Elective Deferrals are not distributed, they shall, when added to amounts deferred under other plans or arrangements described in Section 401(k), 408(k) or 403(b) of the Code, exceed the limit imposed on the Participant by Section 402(g) of the Code for the year in which the deferral occurred. Excess Elective Deferrals shall mean those Elective Deferrals that are includible in a Participant's gross income under Section 402(g) of the Code to the extent such Participant's Elective Deferrals for a taxable year exceed the dollar limitation under such Code section.

An Excess Elective Deferral, and the income or loss allocable thereto, may be distributed before the end of the calendar year in which the Elective Deferrals were made. A Participant who has an Excess Elective Deferral for a taxable year, taking into account only his Elective Deferrals under the Plan or any other plans of the Employer (including any member of the Employer's related group (within the meaning of Section 2.4(b)), shall be deemed to have designated the entire amount of such Excess Elective Deferral.

Excess Elective Deferrals shall be adjusted for any income or loss. For purposes of this Section 10.1, whenever reference is made to the income or loss allocable to an Excess Elective Deferral, such income or loss shall be determined as follows. The income or loss allocable to Excess Elective Deferrals allocated to each Participant shall be the income or loss allocable to the Participant's deferred amounts for the Plan Year multiplied by a fraction, the numerator of which is the Excess Elective Deferrals made on behalf of the Participant for the Plan Year, and the denominator of which is the Participant's Account balance attributable to the Participant's Elective Deferrals on the last day of the Plan Year.

For purposes of this Article Ten, "Elective Deferrals" shall mean any Employer contributions made to the Plan at the election of the Participant, in lieu of cash compensation, and shall include contributions made pursuant to a salary deferral reduction agreement or other deferral mechanism.

With respect to any taxable year, a Participant's Elective Deferrals are the sum of all Employer contributions made on behalf of such Participant pursuant to an election to defer under any qualified cash or deferred arrangement described in Section 401(k) of the Code, any salary reduction simplified employee pension described in Section 408(k)(6) of the Code, and SIMPLE IRA Plan described in Section 408(p) of the Code, any eligible deferred compensation plan under Section 457 of the Code, any plan described under Section 501(c)(18) of the Code, and any Employer contributions made on behalf of a Participant for the purchase of an annuity contract under Section 403(b) of the Code pursuant to a salary reduction agreement. Elective Deferrals shall not include any deferrals properly distributed as excess annual additions.

## **10.2 LIMITATIONS ON 401(k) CONTRIBUTIONS.**

(a) Actual Deferral Percentage Test ("ADP Test"). Notwithstanding anything in this Section 10.2 to the contrary, because the Plan satisfies the requirements of Section 401(k)(12) of the Code, the deferred amounts described in this Section 10.2(a) are not subject to the actual deferral percentage test provided herein

except as provided in the last sentence of this paragraph and the provisions of this Section 10.2(a) shall not apply except as provided in the last sentence of this paragraph. This Section 10.2(a) shall only be applied (i) with respect to any Participant who is a member of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union Local 521, at Minteq International, Inc., Dover Ohio plant (and with respect to such members, the Plan shall be disaggregated into a separate plan for such members, which plan shall be subject to the testing provisions of Section 10.2), and (ii) if the Plan is amended to cease to satisfy the requirements of Section 401(k)(12) of the Code.

Amounts contributed as elective deferrals under Section 4.1(a) and, if so elected by the Employer, "Qualified Matching Contributions" (as defined below) and any Fail-Safe Contributions made under this Section, are considered to be amounts deferred pursuant to Section 401(k) of the Code. For purposes of this Section, these amounts are referred to as the "deferred amounts." For purposes of the "actual deferral percentage test" described below, (i) such deferred amounts must be made before the last day of the twelve (12)-month period immediately following the Plan Year to which the contributions relate, and (ii) the deferred amounts relate to Compensation that either (A) would have been received by the Participant in the Plan Year but for the Participant's election to make deferrals, or (B) is attributable to services performed by the Participant in the Plan Year, and, but for the Participant's election to make deferrals, would have been received by the Participant within two and one-half (2½) months after the close of the Plan Year. The Employer shall maintain records sufficient to demonstrate satisfaction of the actual deferral percentage test and the deferred amounts used in such test.

For purposes of this Section, "Qualified Matching Contributions" shall mean matching contributions which are subject to the distribution and nonforfeitability requirements under Section 401(k) of the Code and satisfy Section 1.401(k)-2(a)(6) of the Treasury Regulations.

As of the last day of each Plan Year, the deferred amounts for the Participants who are Highly-Compensated Employees for the Plan Year shall satisfy either of the following tests:

(1) The actual deferral percentage for the eligible Participants who are Highly-Compensated Employees for the Plan Year shall not exceed the actual deferral percentage for eligible Participants who are Nonhighly-Compensated Employees for the prior Plan Year multiplied by 1.25; or

(2) The actual deferral percentage for eligible Participants who are Highly-Compensated Employees for the Plan Year shall not exceed the actual deferral percentage of eligible Participants who are Nonhighly-Compensated Employees for the prior Plan Year multiplied by two (2), provided that the actual deferral percentage for eligible Participants who are Highly-Compensated Employees for the Plan Year does not exceed the actual deferral percentage for eligible Participants who are Nonhighly-Compensated Employees for the prior Plan Year by more than two (2) percentage points.

Notwithstanding the foregoing, if elected by the Employer by Plan amendment, the foregoing percentage tests shall be applied based on the actual deferral percentage of the Nonhighly-Compensated Employees for the Plan Year; provided, however, the change in testing methods complies with the requirements set forth in the Section 401(k) and 401(m) Treasury Regulations and any other superseding guidance.

In the event the Plan changes from the current year testing method to the prior year testing method, then, for purposes of the first testing year for which the change is effective, the actual deferral percentage for Nonhighly-Compensated Employees for the prior year shall be determined by taking into account only elective deferrals (within the meaning of Section 4.1) for those Nonhighly-Compensated Employees that were taken into account for purposes of the actual deferral percentage test (and not the actual contribution percentage test) under the current year testing method for the prior year.

For purposes of the above tests, the "actual deferral percentage" shall mean for a specified group of Participants for a Plan Year, the average of the ratios (calculated separately for each Participant in such group) of (1) deferred amounts actually paid over to the Trust on behalf of

such Participant for the Plan Year to (2) the Participant's compensation (within the meaning of Section 1.6 of the Plan) or, if the Employer chooses, Participant's compensation determined by using any other definition of compensation that satisfies the nondiscrimination requirements of Section 414(s) of the Code and the regulations thereunder. For purposes hereof, the Participant's compensation shall be referred to as "414(s) Compensation." An Employer may limit the period taken into account for determining 414(s) Compensation to that part of the Plan Year or calendar year in which an Employee was a Participant in the component of the Plan being tested. The period used to determine 414(s) Compensation must be applied uniformly to all Participants for the Plan Year. Deferred amounts on behalf of any Participant shall include (1) any Elective Deferrals made pursuant to the Participant's deferral election (including Excess Elective Deferrals of Highly Compensated Employees), but excluding (a) Excess Elective Deferrals of Nonhighly-Compensated Employees that arise solely from Elective Deferrals made under the Plan or plans of this Employer and (b) Elective Deferrals that are taken into account in the actual contribution percentage test (provided the actual deferral percentage test is satisfied both with and without exclusion of these Elective Deferrals); and (2) Qualified Matching Contributions and Fail-Safe Contributions. For purposes of computing Actual Deferral Percentages, an Employee who would be a Participant but for failure to make Elective Deferrals shall be treated as a Participant on whose behalf no Elective Deferrals are made.

For purposes of this Section 10.2, the actual deferral percentage for any eligible Participant who is a Highly-Compensated Employee for the Plan Year and who is eligible to have Elective Deferrals allocated to his account under two (2) or more plans or arrangements described in Code Section 401(k) that are maintained by the Employer or any employer who is a related group member (within the meaning of Section 2.4(b)) shall be determined as if all such deferrals were made under a single arrangement. In the event that this Plan satisfies the requirements of Code Section 401(k), 401(a)(4) or 410(b) only if aggregated with one (1) or more other plans, or if one (1) or more other plans satisfy the requirements of such Sections of the Code only if aggregated with this Plan, then the provisions of this Section 10.2 shall be applied by determining the actual deferral percentage of eligible Participants as if all such plans were a single plan. Plans may be aggregated in order to satisfy Section 401(k) of the Code only if they have the same Plan Year and use the same average actual deferral percentage testing method.

The determination and treatment of deferred amounts and the actual deferral percentage of any Participant shall be subject to the prescribed requirements of the Secretary of the Treasury.

In the event the actual deferral percentage test is not satisfied for a Plan Year, the Employer, in its discretion, may make a Fail-Safe Contribution for eligible Participants who are Nonhighly-Compensated Employees, equal to a specified percentage of compensation; provided, however such percentage does not exceed the greater of five percent (5%) or two times the Plan's "representative contribution rate." For purposes of this paragraph:

- (1) "compensation" - shall mean compensation used for the actual deferral percentage test.
- (2) "representative contribution rate" - shall mean the greater of:
  - (A) the lowest applicable contribution rate (defined below) of any eligible Nonhighly-Compensated Employee among a group of eligible Nonhighly-Compensated Employees that consists of at least fifty percent (50%) of the total eligible Nonhighly-Compensated Employees for the Plan Year, or
  - (B) the lowest applicable contribution rate of any eligible Nonhighly-Compensated in the group of all eligible Nonhighly-Compensated Employees for the Plan Year and who is employed by the Employer on the last day of the Plan Year.

The applicable contribution rate for an eligible Nonhighly-Compensated Employee is the sum of the qualified matching contribution taken into account for the eligible Nonhighly-

Compensated Employee for the Plan Year and the Fail-Safe Contribution made for the eligible Nonhighly-Compensated Employee for the Plan Year, divided by the eligible Nonhighly-Compensated Employee's compensation for the same period.

(b) Distributions of Excess Contributions.

(1) In General. If the actual deferral percentage test of Section 10.2(a) is not satisfied for a Plan Year, then the "excess contributions", and income allocable thereto, shall be distributed, to the extent required under Treasury Regulations, no later than the last day of the Plan Year following the Plan Year for which the excess contributions were made. However, if such excess contributions are distributed later than two and one-half (2½) months (or such longer period as permitted by applicable law and/or regulatory guidance) following the last day of the Plan Year in which such excess contributions were made, a ten percent (10%) excise tax shall be imposed upon the Employer with respect to such excess contributions.

(2) Excess Contributions. For purposes of this Section, "excess contributions" shall mean, with respect to any Plan Year, the excess of:

(A) The aggregate amount of Employer contributions actually taken into account in computing the numerator of the actual deferral percentage of Highly-Compensated Employees for such Plan Year, over

(B) The maximum amount of such contributions permitted by the ADP Test under Section 10.2(a) (determined by hypothetically reducing contributions made on behalf of Highly-Compensated Employees in order of the actual deferral percentages, beginning with the highest of such percentages).

Excess contributions shall be allocated to the Highly-Compensated Employees with the highest dollar amounts of contributions taken into account in calculating the actual deferral percentage test for the year in which the excess arose, beginning with the Highly-Compensated Employee with the highest dollar amount of such contributions and continuing in descending order until all the excess contributions have been allocated. For purposes of the preceding sentence, the "highest dollar amount" is determined after distribution of any excess contributions. Any Employer matching contributions and earnings thereon that relate to such excess contributions shall be forfeited and applied in accordance with Section 6.2. To the extent a Highly-Compensated Employee has not reached his catch-up contribution limit (set forth in Section 4.1(e) of the Plan), excess contributions allocated to such Highly-Compensated Employee shall be treated as catch-up contributions and shall not be treated as excess contributions.

(3) Determination of Income. Excess contributions shall be adjusted for any income or loss up to the end of the Plan Year in which the excess contributions were made.

(4) Accounting for Excess Contributions. Excess contributions shall be distributed from that portion of the Participant's Account attributable to such deferred amounts to the extent allowable under Treasury regulations.

**10.3 NONDISCRIMINATION TEST FOR EMPLOYER MATCHING CONTRIBUTIONS AND AFTER-TAX CONTRIBUTIONS.**

(a) Average Contribution Percentage Test ("ACP Test"). Notwithstanding anything in this Section 10.3 to the contrary, because the Plan satisfies the requirements of Section 401(k)(12) and Section 401(m)(11) of the Code, the amounts described in this Section 10.3(a), other than Employee after-tax contributions, are not required to be taken into account in performing the average contribution percentage test provided herein, but the Administrator may elect to take such amounts into account in performing such test. This Section 10.3(a) shall be applied with respect to amounts in addition to Employee after-tax contributions if the Plan is amended to cease to satisfy the requirements of Section 401(k)(12) of the Code. This Section 10.3 shall apply with respect to

## Employee after-tax contributions.

To the extent required by applicable law, the provisions of this Section shall apply if Employer matching contributions are made in any Plan Year under Section 4.3 and such matching contributions are not used to satisfy the actual deferral percentage test of Section 10.2 and/or in the event Employee after-tax contributions are made to the Plan under Section 4.2.

Any Employee after-tax contributions that are used to satisfy the average contribution percentage test shall satisfy the requirements of Section 1.401(m)-2(a)(6) of the Treasury Regulations.

As of the last day of each Plan Year, the average contribution percentage for Highly-Compensated Employees for the Plan Year shall satisfy either of the following tests:

(1) The average contribution percentage for eligible Participants who are Highly-Compensated Employees for the Plan Year shall not exceed the average contribution percentage for eligible Participants who are Nonhighly-Compensated Employees for the prior Plan Year multiplied by 1.25; or

(2) The average contribution percentage for eligible Participants who are Highly-Compensated Employees for the Plan Year shall not exceed the average contribution percentage for eligible Participants who are Nonhighly-Compensated Employees for the prior Plan Year multiplied by two (2), provided that the average contribution percentage for eligible Participants who are Highly-Compensated Employees for the Plan Year does not exceed the average contribution percentage for eligible Participants who are Nonhighly-Compensated Employees for the prior Plan Year by more than two (2) percentage points.

Notwithstanding the foregoing, if elected by the Employer by Plan amendment, the foregoing percentage tests shall be applied based on the actual average contribution percentage of the Nonhighly-Compensated Employees for the Plan Year; provided, however, the change in testing methods complies with the requirements set forth in the Section 401(k) and 401(m) Treasury Regulations and any other superseding guidance.

In the event the Plan changes from the current year testing method to the prior year testing method, then, for purposes of the first testing year for which the change is effective, the average contribution percentage for Nonhighly-Compensated Employees for the prior year shall be determined by taking into account only (a) after-tax contributions for those Nonhighly-Compensated Employees for the prior year, and (b) matching contributions for those Nonhighly-Compensated Employees that were taken into account for purposes of the average contribution percentage test (and not the average actual deferral percentage test) under the current year testing method for the prior year.

For purposes of the above tests, the "average contribution percentage" shall mean the average (expressed as a percentage) of the contribution percentages of the "eligible Participants" in each group. The "contribution percentage" shall mean the ratio (expressed as a percentage) that the sum of Employer matching contributions, and, if applicable, Employee after-tax contributions, and elective deferrals under Section 4.1 (to the extent such elective deferrals are not used to satisfy the actual deferral percentage test of Section 10.2) under the Plan on behalf of the eligible Participant for the Plan Year bears to the eligible Participant's compensation (within the meaning of Section 1.6 of the Plan) or, if the Employer chooses, Participant's compensation determined by using any other definition of compensation that satisfies the nondiscrimination requirements of Section 414(s) of the Code and the regulations thereunder. For purposes hereof, the Participant's compensation shall be referred to as "414(s) Compensation." An Employer may limit the period taken into account for determining 414(s) Compensation to that part of the Plan Year or calendar year in which an Employee was a Participant in the component of the Plan being tested. The period used to determine 414(s) Compensation must be applied uniformly to all Participants for the Plan Year. Such average contribution percentage shall be determined without regard to matching contributions that are used either to correct excess contributions hereunder or because contributions to which they relate are excess deferrals under Section 10.1 or excess contributions under Section 10.2. "Eligible Participant" shall mean each Employee



who is eligible to receive Employer matching contributions or make after-tax contributions.

For purposes of this Section 10.3, the contribution percentage for any eligible Participant who is a Highly-Compensated Employee for the Plan Year and who is eligible to have Employer matching contributions, elective deferrals and/or after-tax contributions allocated to his account under two (2) or more plans described in Section 401(a) of the Code or under arrangements described in Section 401(k) of the Code that are maintained by the Employer or any member of the Employer's related group (within the meaning of Section 2.4(b)), shall be determined as if all such contributions were made under a single plan.

In the event that this Plan satisfies the requirements of Section 401(m), 401(a)(4) or 410(b) of the Code only if aggregated with one (1) or more other plans, or if one (1) or more other plans satisfy the requirements of such Sections of the Code only if aggregated with this Plan, then the provisions of this Section 10.3 shall be applied by determining the contribution percentages of eligible Participants as if all such plans were a single plan.

The determination and treatment of the contribution percentage of any Participant shall satisfy such other requirements as may be prescribed by the Secretary of the Treasury.

(b) Distribution of Excess Employer Matching Contributions.

(1) In General. If the nondiscrimination tests of Section 10.3(a) are not satisfied for a Plan Year, then the "excess aggregate contributions", and any income allocable thereto, shall be forfeited, if otherwise forfeitable, no later than the last day of the Plan Year following the Plan Year for which the nondiscrimination tests are not satisfied, and shall be used to reduce Employer matching contributions under the Plan. To the extent that such "excess aggregate contributions" are nonforfeitable, such excess contributions shall be distributed to the Participant on whose behalf the excess contributions were made no later than the last day of the Plan Year following the Plan Year for which such "excess aggregate contributions" were made. However, if such excess aggregate contributions are distributed later than two and one-half (2½) months (or such longer period as permitted by applicable law and/or regulatory guidance) following the last day of the Plan Year in which such excess aggregate contributions were made, a ten percent (10%) excise tax shall be imposed upon the Employer with respect to such excess aggregate contributions. For purposes of the limitations of Section 11.1(b)(1) of the Plan, excess aggregate contributions shall be considered annual additions.

(2) Excess Aggregate Contributions. For purposes of this Section, "excess aggregate contributions" shall mean, with respect to any Plan Year, the excess of:

(A) The aggregate amount of Employer matching contributions and, if applicable, Employee after-tax contributions, and elective deferrals under Section 4.1 (to the extent not used to satisfy the actual deferral percentage test of Section 10.2) actually taken into account in computing the numerator of the actual contribution percentage of Highly-Compensated Employees for such Plan Year, over

(B) The maximum amount of such contributions permitted by the ACP Test under Section 10.3(a) (determined by hypothetically reducing contributions made on behalf of Highly-Compensated Employees in order of the actual contribution percentages, beginning with the highest of such percentages).

Excess contributions shall be allocated to the Highly-Compensated Employee with the largest "contribution percentage amounts" (as defined below) taken into account in calculating the average contribution percentage test for the year in which the excess arose, beginning with the Highly-Compensated Employee with the largest amount of such contribution percentage amounts and continuing in descending order until all the excess aggregate contributions have been allocated. For purposes of the preceding sentence, the "largest amount" is determined after distribution of any excess aggregate contributions.

For purposes of the preceding paragraph, "contribution percentage amounts" shall

mean the sum of Employer matching contributions and, if applicable, Employee after-tax contributions, and elective deferrals (to the extent not used to satisfy the actual deferral percentage test of Section 10.2) made under the Plan on behalf of the Participant for the Plan Year.

(3) Determination of Income. Excess aggregate contributions shall be adjusted for an income or loss up to the end of the Plan Year in which the excess aggregate contributions were made.

Notwithstanding the foregoing, to the extent otherwise required to comply with the requirements of Section 401(a)(4), 401(k)(3), or 401(m)(3) of the Code and the regulations thereunder, vested matching contributions may be forfeited.

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## ARTICLE XI-- LIMITATION ON ANNUAL ADDITIONS

### **11.1** RULES AND DEFINITIONS.

(a) Rules. The following rules shall limit additions to Participants' Accounts:

(1) If the Participant does not participate, and has never participated, in another qualified plan maintained by the Employer, the amount of annual additions which may be credited to the Participant's Account for any limitation year shall not exceed the lesser of the "maximum permissible" amount (as hereafter defined) or any other limitation contained in this Plan. If the Employer contribution that would otherwise be allocated to the Participant's Account would cause the annual additions for the limitation year to exceed the maximum permissible amount, the amount allocated shall be reduced so that the annual additions for the limitation year shall equal the maximum permissible amount.

(2) Prior to determining the Participant's actual compensation for the limitation year, the Employer may determine the maximum permissible amount for a Participant on the basis of a reasonable estimation of the Participant's compensation for the limitation year, uniformly determined for all Participants similarly situated.

(3) As soon as is administratively feasible after the end of the limitation year, the maximum permissible amount for the limitation year shall be determined on the basis of the Participant's actual compensation for the limitation year.

(4) If the limitations of Section 415 of the Code are exceeded, such excess amount shall be corrected in accordance with the requirements of applicable law, including pursuant to the Employee Plans Compliance Resolution System.

(5) If, in addition to this Plan, the Participant is covered under another defined contribution plan maintained by the Employer, or a welfare benefit fund, as defined in Code Section 419(e), maintained by the Employer, or an individual medical account, as defined in Code Section 415(1)(2), maintained by the Employer which provides an annual addition, the annual additions which may be credited to a Participant's account under all such plans for any such limitation year shall not exceed the maximum permissible amount. Benefits shall be reduced under any discretionary defined contribution plan before they are reduced under any other defined contribution plan. If both plans are discretionary contribution plans, they shall first be reduced under this Plan. Any excess amount attributable to this Plan shall be disposed of in the manner described in Section 11.1(a)(4).

(b) Definitions.

(1) Annual additions: The following amounts credited to a Participant's Account for the limitation year shall be treated as annual additions:

(A) Employer contributions;

(B) Elective deferrals (within the meaning of Section 4.1);

(C) Employee after-tax contributions, if any;

(D) Forfeitures, if any; and

(E) Amounts allocated after March 31, 1984 to an individual medical account, as defined in Section 415(l)(2) of the Code, which is part of a pension or annuity plan maintained by the Employer. Also, amounts derived from contributions paid or accrued after December 31, 1985 in taxable years ending after such date which are

attributable to post-retirement medical benefits allocated to the separate account of a Key Employee, as defined in Section 419A(d)(3), and amounts under a welfare benefit fund, as defined in Section 419(e), maintained by the Employer, shall be treated as annual additions to a defined contribution plan.

Employer and employee contributions taken into account as annual additions shall include "excess contributions" as defined in Section 401(k)(8)(B) of the Code, "excess aggregate contributions" as defined in Section 401(m)(6)(B) of the Code, and "excess deferrals" as defined in Section 402(g) of the Code, regardless of whether such amounts are distributed, recharacterized or forfeited, unless such amounts constitute excess deferrals that were distributed to the Participant no later than April 15 of the taxable year following the taxable year of the Participant in which such deferrals were made.

For this purpose, any excess amount applied under Section 11.1(a)(4) in the limitation year to reduce Employer contributions shall be considered annual additions for such limitation year.

(2) Compensation: For purposes of determining maximum permitted benefits under this Section, Compensation shall have the meaning provided in Section 1.6.

Compensation shall be measured on the basis of compensation paid in the limitation year.

Any compensation described in this Section 11.1(b)(2) does not fail to be Compensation merely because it is paid after the Participant's severance from employment with the Employer, provided the Compensation is paid by the later of 2½ months after severance from employment with the Employer or the end of the limitation year that includes the date of severance from employment. In addition, payment for unused bona fide sick, vacation or other leave shall be included as Compensation if (i) the Participant would have been able to use the leave if employment had continued, (ii) such amounts are paid by the later of 2½ months after severance from employment with the Employer or the end of the Plan Year that includes the date of severance from employment and (iii) such amounts would have been included as Compensation if they were paid prior to the Participant's severance from employment with the Employer.

(3) Defined contribution dollar limitation: This shall mean \$40,000, as adjusted under Section 415(d) of the Code.

(4) Employer: This term refers to the Employer that adopts this Plan, and all members of a controlled group of corporations (as defined in Section 414(b) of the Code, as modified by Section 415(h)), commonly-controlled trades or businesses (as defined in Section 414(c), as modified by Section 415(h)), or affiliated service groups (as defined in Section 414(m)) of which the Employer is a part, or any other entity required to be aggregated with the Employer under Code Section 414(o).

(5) Limitation year: This shall mean the Plan Year, unless the Employer elects a different twelve (12) consecutive month period. The election shall be made by the adoption of a Plan amendment by the Employer. If the limitation year is amended to a different twelve (12) consecutive month period, the new limitation year must begin on a date within the limitation year in which the amendment is made.

(6) Maximum permissible amount: Except to the extent permitted under Section 4.1(e) and Section 414(v) of the Code, if applicable, this shall mean an amount equal to the lesser of the defined contribution dollar limitation or one hundred percent (100%) of the Participant's compensation for the limitation year. If a short limitation year is created because of an amendment changing the limitation year to a different twelve (12)-consecutive month period, the maximum permissible amount shall not exceed the defined contribution dollar limitation multiplied by the following fraction:

Number of months in the short limitation year

12

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## **ARTICLE XII-- AMENDMENT AND TERMINATION**

**12.1 AMENDMENT.** The Employer reserves the right to amend, or modify the Plan at any time, or from time to time, in whole or in part. However, the Committee (within the meaning of Section 9.1) may make administrative changes to the Plan so as to conform with or take advantage of governmental requirements, statutes or regulations. Any such amendment shall become effective under its terms upon adoption by the Employer or the Committee, as the case may be. However, no amendment affecting the duties, powers or responsibilities of the Trustee may be made without the written consent of the Trustee. No amendment shall be made to the Plan which shall:

(a) make it possible (other than as provided in Section 14.3) for any part of the corpus or income of the Trust Fund (other than such part as may be required to pay taxes and administrative expenses) to be used for or diverted to purposes other than the exclusive benefit of the Participants or their Beneficiaries;

(b) decrease a Participant's account balance or eliminate an optional form of payment (unless permitted by applicable law) with respect to benefits accrued as of the later of (i) the date such amendment is adopted, or (ii) the date the amendment becomes effective; or

(c) alter the schedule for vesting in a Participant's Account with respect to any Participant with three (3) or more Years of Service without his consent or deprive any Participant of any nonforfeitable portion of his Account.

Notwithstanding the other provisions of this Section or any other provisions of the Plan, any amendment or modification of the Plan may be made retroactively if necessary or appropriate within the remedial amendment period to conform to or to satisfy the conditions of any law, governmental regulation, or ruling, and to meet the requirements of the Employee Retirement Income Security Act of 1974, as it may be amended.

If any corrective amendment (within the meaning of Section 1.401(a)(4)-11(g) of the Treasury Regulations) is made after the end of a Plan Year, such amendment shall satisfy the requirements of Section 1.401(a)(4)-11(g)(3) and (4) of the Treasury Regulations.

**12.2 TERMINATION OF THE PLAN.** The Employer, by resolution of its board of directors, reserves the right at any time and in its sole discretion to discontinue payments under the Plan and to terminate the Plan. In the event the Plan is terminated, or upon complete discontinuance of contributions under the Plan by the Employer, the rights of each Participant to his Account on the date of such termination or discontinuance of contributions, to the extent of the fair market value under the Trust Fund, shall remain fully vested and nonforfeitable. The Employer shall direct the Trustee to distribute the Trust Fund in accordance with the Plan's distribution provisions to the Participants and their Beneficiaries, each Participant or Beneficiary receiving a portion of the Trust Fund equal to the value of his Account as of the date of distribution. These distributions may be implemented by the continuance of the Trust and the distribution of the Participants' Account shall be made at such time and in such manner as though the Plan had not terminated, or by any other appropriate method, including rollover into Individual Retirement Accounts. Upon distribution of the Trust Fund, the Trustee shall be discharged from all obligations under the Trust and no Participant or Beneficiary shall have any further right or claim therein. In the event of the partial termination of the Plan, the Accounts of all affected Participants shall remain fully vested and nonforfeitable.

In the event of the termination of the Plan, any amounts to be distributed to Participants or Beneficiaries who cannot be located shall be handled in accordance with the provisions of applicable law (which may include the establishment of an account for such Participant or Beneficiary).

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## ARTICLE XIII-- TOP-HEAVY PROVISIONS

**13.1 APPLICABILITY.** The provisions of this Article shall become applicable only for any Plan Year in which the Plan is a Top-Heavy Plan (as defined in Section 13.2(b)) and only if, and to the extent, required under Section 416 of the Code and the regulations issued thereunder. Notwithstanding the foregoing, this Article shall not apply in any Plan Year in which the Plan consists solely of a cash or deferred arrangement which meets the requirements of Section 401(k)(12) or 401(k)(13) of the Code and matching contributions with respect to which the requirements of Section 401(m)(11) or 401(m)(12) of the Code are met.

**13.2 DEFINITIONS.** For purposes of this Article, the following definitions shall apply:

(a) **"Key Employee":** "Key Employee" shall mean any Employee or former Employee (including any deceased Employee) who, at any time during the Plan Year that includes the determination date, was an officer of the Employer having annual compensation greater than \$130,000 (as adjusted under Section 416(i)(1) of the Code), a five percent (5%) owner of the Employer, or a one percent (1%) owner of the Employer having annual compensation of more than \$150,000. For this purpose, annual compensation shall mean compensation as defined in Section 11.1(b)(2) of the Plan. The determination of who is a Key Employee (including the terms "5% owner" and "1% owner") shall be made in accordance with Section 416(i)(1) of the Code and the applicable regulations and other guidance of general applicability issued thereunder.

(b) **"Top-Heavy Plan":**

(1) The Plan shall constitute a "Top-Heavy Plan" if any of the following conditions exist:

(A) The top-heavy ratio for the Plan exceeds sixty percent (60%) and the Plan is not part of any required aggregation group or permissive aggregation group of plans; or

(B) The Plan is part of a required aggregation group of plans (but is not part of a permissive aggregation group) and the top-heavy ratio for the group of plans exceeds sixty percent (60%); or

(C) The Plan is a part of a required aggregation group of plans and part of a permissive aggregation group and the top-heavy ratio for the permissive aggregation group exceeds sixty percent (60%).

(2) If the Employer maintains one (1) or more defined contribution plans (including any simplified employee pension plan funded with individual retirement accounts or annuities) and the Employer maintains or has maintained one (1) or more defined benefit plans which have covered or could cover a Participant in this Plan, the top-heavy ratio is a fraction, the numerator of which is the sum of account balances under the defined contribution plans for all Key Employees and the actuarial equivalents of accrued benefits under the defined benefit plans for all Key Employees, and the denominator of which is the sum of the account balances under the defined contribution plans for all Participants and the actuarial equivalents of accrued benefits under the defined benefit plans for all Participants. Both the numerator and denominator of the top-heavy ratio shall include any distribution of an account balance or an accrued benefit made in the one (1)-year period ending on the determination date and any contribution due to a defined contribution pension plan but unpaid as of the determination date. However, in the case of any distribution made for a reason other than severance from employment, death, or disability, this provision shall be applied by substituting a five (5)-year period for a one (1)-year period. In determining the accrued benefit of a non-Key Employee who is participating in a plan that is part of a required

aggregation group, the method of determining such benefit shall be either (i) in accordance with the method, if any, that uniformly applies for accrual purposes under all plans maintained by the Employer or any member of the Employer's related group (within the meaning of Section 2.4(b)), or (ii) if there is no such method, as if such benefit accrued not more rapidly than the slowest accrual rate permitted under the fractional accrual rate of Code Section 411(b)(1)(C).

(3) For purposes of (1) and (2) above, the value of account balances and the actuarial equivalents of accrued benefits shall be determined as of the most recent Valuation Date that falls within or ends with the twelve (12)-month period ending on the determination date.

The account balances and accrued benefits of a Participant who is not a Key Employee but who was a Key Employee in a prior year shall be disregarded. The accrued benefits and account balances of Participants who have performed no service with any Employer maintaining the plan for the one (1)-year period ending on the determination date shall be disregarded. The calculations of the top-heavy ratio, and the extent to which distributions, rollovers, and transfers are taken into account shall be made under Section 416 of the Code and regulations issued thereunder. Deductible Employee contributions shall not be taken into account for purposes of computing the top-heavy ratio. When aggregating plans, the value of account balances and accrued benefits shall be calculated with reference to the determination dates that fall within the same calendar year.

(4) Definition of terms for Top-Heavy status:

(A) "**Top-heavy ratio**" shall mean the following:

(1) If the Employer maintains one or more defined contribution plans (including any simplified employee pension plan funded with individual retirement accounts or annuities) and the Employer has never maintained any defined benefit plans which have covered or could cover a Participant in this Plan, the top-heavy ratio is a fraction, the numerator of which is the sum of the account balances of all Key Employees as of the determination date, and the denominator of which is the sum of the account balances of all Participants as of the determination date. Both the numerator and the denominator shall be increased by any contributions due but unpaid to a defined contribution pension plan as of the determination date.

(B) "**Permissive aggregation group**" shall mean the required aggregation group of plans plus any other plan or plans of the Employer which, when considered as a group with the required aggregation group, would continue to satisfy the requirements of Sections 401(a)(4) and 410 of the Code.

(C) "**Required aggregation group**" shall mean (i) each qualified plan of the Employer (including any terminated plan) in which at least one Key Employee participates or participated at any time during the Plan Year containing the Determination date or any of the four preceding Plan Years, and (ii) any other qualified plan of the Employer which enables a plan described in (i) to meet the requirements of Section 401(a)(4) or 410 of the Code.

(D) "**Determination date**" shall mean, for any Plan Year subsequent to the first Plan Year, the last day of the preceding Plan Year. For the first Plan Year of the Plan, "determination date" shall mean the last day of that Plan Year.

(E) "**Valuation Date**" shall mean the last day of the Plan Year.

(F) Actuarial equivalence shall be based on the interest and mortality rates utilized to determine actuarial equivalence when benefits are paid from any defined benefit plan. If no rates are specified in said plan, the following shall be utilized: pre- and post-retirement interest -- five percent (5%); post-retirement mortality based on the Unisex Pension (1984) Table as used by the Pension Benefit Guaranty Corporation on the date of execution hereof.



**13.3 ALLOCATION OF EMPLOYER CONTRIBUTIONS AND FORFEITURES FOR A TOP-HEAVY PLAN YEAR.**

(a) Except as otherwise provided below, in any Plan Year in which the Plan is a Top-Heavy Plan, the Employer contributions and forfeitures allocated on behalf of any Participant who is a non-Key Employee shall not be less than the lesser of three percent (3%) of such Participant's compensation (as defined in Section 11.1(b)(2) and as limited by Section 401(a)(17) of the Code) or the largest percentage of Employer contributions and, elective deferrals (within the meaning of Section 4.1), and forfeitures as a percentage of the Key Employee's compensation (as defined in Section 11.1(b)(2) and as limited by Section 401(a)(17) of the Code), allocated on behalf of any Key Employee for that Plan Year. This minimum allocation shall be made even though, under other Plan provisions, the Participant would not otherwise be entitled to receive an allocation or would have received a lesser allocation for the Plan Year because of insufficient Employer contributions under Section 4.3, the Participant's failure to make elective deferrals under Section 4.1 or compensation is less than a stated amount.

(b) The minimum allocation under this Section shall not apply to any Participant who was not employed by the Employer on the last day of the Plan Year.

(c) Elective deferrals may not be taken into account for the purpose of satisfying the minimum allocation. However, Employer matching contributions may be taken into account for the purpose of satisfying the minimum allocation.

(d) For purposes of the Plan, a non-Key Employee shall be any Employee or Beneficiary of such Employee, any former Employee, or Beneficiary of such former Employee, who is not or was not a Key Employee during the Plan Year ending on the determination date.

(e) If no defined benefit plan has ever been part of a permissive or required aggregation group of plans of the Employer, the contributions and forfeitures under this step shall be offset by any allocation of contributions and forfeitures under any other defined contribution plan of the Employer with a Plan Year ending in the same calendar year as this Plan's Valuation Date.

(f) There shall be no duplication of the minimum benefits required under Code Section 416. Benefits shall be provided under defined contribution plans before under defined benefit plans. If a defined benefit plan (active or terminated) is part of the permissive or required aggregation group of plans, the allocation method of subparagraph (a) above shall apply, except that "3%" shall be increased to "5%."

**13.4 VESTING.** The provisions contained in Section 6.1 relating to vesting shall continue to apply in any Plan Year in which the Plan is a Top-Heavy Plan, and apply to all benefits within the meaning of Section 411(a)(7) of the Code except those attributable to Employee contributions and elective deferrals under Section 4.1 and Section 4.2, including benefits accrued before the effective date of Section 416 and benefits accrued before the Plan became a Top-Heavy Plan.

Payment of a Participant's vested Account balance under this Section shall be made in accordance with the provisions of Article Seven.

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## **ARTICLE XIV-- MISCELLANEOUS PROVISIONS**

**14.1 PLAN DOES NOT AFFECT EMPLOYMENT.** Neither the creation of this Plan, any amendment thereto, the creation of any fund nor the payment of benefits hereunder shall be construed as giving any legal or equitable right to any Employee or Participant against the Employer, its officers or Employees, or against the Trustee. All liabilities under this Plan shall be satisfied, if at all, only out of the Trust Fund held by the Trustee. Participation in the Plan shall not give any Participant any right to be retained in the employ of the Employer, and the Employer hereby expressly retains the right to hire and discharge any Employee at any time with or without cause, as if the Plan had not been adopted, and any such discharged Participant shall have only such rights or interests in the Trust Fund as may be specified herein.

**14.2 SUCCESSOR TO THE EMPLOYER.** In the event of the merger, consolidation, reorganization or sale of assets of the Employer, under circumstances in which a successor person, firm, or corporation shall carry on all or a substantial part of the business of the Employer, and such successor shall employ a substantial number of Employees of the Employer and shall elect to carry on the provisions of the Plan, such successor shall be substituted for the Employer under the terms and provisions of the Plan upon the filing in writing with the Trustee of its election to do so.

**14.3 REPAYMENTS TO THE EMPLOYER.** Notwithstanding any provisions of this Plan to the contrary:

(a) Any monies or other Plan assets attributable to any contribution made to this Plan by the Employer because of a mistake of fact shall be returned to the Employer within one (1) year after the date of contribution.

(b) Any monies or other Plan assets attributable to any contribution made to this Plan by the Employer shall be refunded to the Employer, to the extent such contribution is predicated on the deductibility thereof under the Code and the income tax deduction for such contribution is disallowed. Such amount shall be refunded within one (1) taxable year after the date of such disallowance or within one (1) year of the resolution of any judicial or administrative process with respect to the disallowance. All Employer contributions hereunder are expressly contributed based upon such contributions' deductibility under the Code.

**14.4 BENEFITS NOT ASSIGNABLE.** Except as provided in Section 414(p) of the Code with respect to "qualified domestic relations orders," or except as provided in Section 401(a)(13)(C) of the Code with respect to certain judgments and settlements, the rights of any Participant or his Beneficiary to any benefit or payment hereunder shall not be subject to voluntary or involuntary alienation or assignment.

With respect to any "qualified domestic relations order" relating to the Plan, the Plan shall permit distribution to an alternate payee under such order at any time, irrespective of whether the Participant has attained his "earliest retirement age" (within the meaning of Section 414(p)(4)(B) of the Code) under the Plan. A distribution to an alternate payee prior to the Participant's attainment of his earliest retirement age shall, however, be available only if the order specifies distribution at that time or permits an agreement between the Plan and the alternate payee to authorize an earlier distribution. Nothing in this paragraph shall, however, give a Participant a right to receive distribution at a time otherwise not permitted under the Plan nor does it permit the alternate payee to receive a form of payment not otherwise permitted under the Plan or under said Section 414(p) of the Code.

**14.5 MERGER OF PLANS.** In the case of any merger or consolidation of this Plan with, or transfer of the assets or liabilities of the Plan to, any other plan, the terms of such merger, consolidation or transfer shall be such that each Participant would receive (in the event of termination of this Plan or its successor immediately thereafter) a benefit which is no less than what the

Participant would have received in the event of termination of this Plan immediately before such merger, consolidation or transfer.

**14.6 INVESTMENT EXPERIENCE NOT A FORFEITURE.** The decrease in value of any Account due to adverse investment experience shall not be considered an impermissible "forfeiture" of any vested balance.

**14.7 CONSTRUCTION.** Wherever appropriate, the use of the masculine gender shall be extended to include the feminine and/or neuter or vice versa; and the singular form of words shall be extended to include the plural; and the plural shall be restricted to mean the singular.

**14.8 GOVERNING DOCUMENTS.** A Participant's rights shall be determined under the terms of the Plan as in effect at the Participant's date of termination from employment, or, if later, and to the extent permitted by applicable law, as determined under the terms of the Plan.

**14.9 GOVERNING LAW.** The provisions of this Plan shall be construed under the laws of the state of New York, except to the extent such laws are preempted by Federal law.

**14.10 HEADINGS.** The Article headings and Section numbers are included solely for ease of reference. If there is any conflict between such headings or numbers and the text of the Plan, the text shall control.

**14.11 COUNTERPARTS.** This Plan may be executed in any number of counterparts, each of which shall be deemed an original; said counterparts shall constitute but one and the same instrument, which may be sufficiently evidenced by any one counterpart.

**14.12 LOCATION OF PARTICIPANT OR BENEFICIARY UNKNOWN.** In the event that all or any portion of the distribution payable to a Participant or to a Participant's Beneficiary hereunder shall, at the expiration of five (5) years after it shall become payable, remain unpaid solely by reason of the inability of the Administrator to ascertain the whereabouts of such Participant or Beneficiary, after sending a registered letter, return receipt requested, to the last known address, and after further diligent effort, the amount so distributable shall be forfeited and used to pay Plan administrative expenses and/or used to reduce future Employer contributions. In the event a Participant or Beneficiary is located subsequent to the forfeiture of his Account balance, such Account balance shall be restored.

**14.13 DISTRIBUTION TO MINOR OR LEGALLY INCAPACITATED.** In the event any benefit is payable to a minor or to a person deemed to be incompetent or to a person otherwise under legal disability, or who is by sole reason of advanced age, illness, or other physical or mental incapacity incapable of handling the disposition of his property, the Administrator, may direct the Trustee to make payment of such benefit to the minor's or legally incapacitated person's court appointed guardian, person designated in a valid power of attorney, or any other person authorized under state law. The receipt of any such payment or distribution shall be a complete discharge of liability for Plan obligations.

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19757561.4

**IN WITNESS WHEREOF**, the Employer has caused this Plan to be executed on the **21st** day of December, 2012.

MINERALS TECHNOLOGIES INC.

By: /s/ Thomas J. Meek

Print Name: Thomas J. Meek

On behalf of the Plan Committee

19757561.4

## SUBSIDIARIES OF THE COMPANY

<u>Name of the Company</u>	<u>Jurisdiction of Organization</u>
APP China Specialty Minerals Pte Ltd.	Singapore
ASMAS Agir Sanayi Malzemeleri Imal ve Tic. A.S.	Turkey
Barretts Minerals Inc.	Delaware
Centre International de Couchage CIC Inc.	Canada
Double A Specialty Minerals Co., Ltd.	Thailand
Gold Lun Chemicals (Zhenjiang).	China
Gold Sheng Chemicals (Zhenjiang) Co., Ltd.	China
Gold Zuan Chemicals (Suzhou) Co., Ltd.	China
Hi-Tech Specialty Minerals Company, Limited	Thailand
Minerals Technologies do Brasil Comercio é Industria de Minerais Ltda.	Brazil
Minerals Technologies Europe N.V.	Belgium
Minerals Technologies Holdings Inc.	Delaware
Minerals Technologies Holdings Ltd.	United Kingdom
Minerals Technologies India Private Limited	India
Minerals Technologies Mexico Holdings, S. de R. L. de C.V.	Mexico
Minerals Technologies South Africa (Pty) Ltd.	South Africa
Mintech Canada Inc.	Canada
Mintech Japan K.K.	Japan
Minteq Australia Pty Ltd.	Australia
Minteq B.V.	The Netherlands
Minteq Europe Limited.	Ireland
Minteq International GmbH	Germany
Minteq International Inc.	Delaware
Minteq International (Suzhou) Co., Ltd.	China
Minteq Italiana S.p.A.	Italy
Minteq Magnesite Limited	Ireland
Minteq Shapes and Services Inc.	Delaware
Minteq UK Limited.	United Kingdom
MTI Bermuda L.P.	Bermuda
MTI Holdings GmbH	Germany
MTI Holding Singapore Pte. Ltd.	Singapore
MTI Holdco I LLC	Delaware
MTI Holdco II LLC	Delaware
MTI Netherlands B.V.	Netherlands
MTI Ventures B.V.	Netherlands
Performance Minerals Netherlands C.V.	Netherlands
PT Sinar Mas Specialty Minerals	Indonesia
Rayagada Minerals & Chemicals Private Limited	India
SMI NewQuest India Private Limited	India
SMI Poland Sp. z o.o.	Poland
Specialty Minerals Bangladesh Limited	Bangladesh
Specialty Minerals Benelux	Belgium
Specialty Minerals do Brasil Participacoes Ltda.	Brazil
Specialty Minerals FMT K.K.	Japan
Specialty Minerals France s.p.a.s.	France
Specialty Minerals Inc.	Delaware
Specialty Minerals India Holding Inc.	Delaware
Specialty Minerals International Inc.	Delaware
Specialty Minerals Malaysia Sdn. Bhd.	Malaysia
Specialty Minerals (Michigan) Inc.	Michigan
Specialty Minerals Mississippi Inc.	Delaware
Specialty Minerals Nordic Oy Ab	Finland
Specialty Minerals (Portugal) Especialidades Minerais, S.A.	Portugal
Specialty Minerals S.A. de C.V.	Mexico
Specialty Minerals Servicios S. de R. L. de C.V.	Mexico
Specialty Minerals Slovakia, spol. sr.o.	Slovakia
Specialty Minerals South Africa (Pty) Limited	South Africa
Specialty Minerals (Thailand) Limited	

Consent of Independent Registered Public Accounting Firm

The Board of Directors  
Minerals Technologies Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-160002, 33-59080, 333-62739, and 333-138245) on Form S-8 of Minerals Technologies Inc. of our reports dated February 22, 2013, with respect to the consolidated balance sheets as of December 31, 2012 and 2011, and the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2012, and the related financial statement schedule and the effectiveness of internal control over financial reporting as of December 31, 2012, which reports appear in the December 31, 2012 annual report on Form 10-K of Minerals Technologies Inc.

/s/ KPMG LLP

New York, New York  
February 22, 2013

**POWER OF ATTORNEY FOR FILINGS UNDER  
THE SECURITIES ACT OF 1933, AS AMENDED AND  
THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED**

Know all by these presents, that the undersigned hereby constitutes and appoints the Secretary and any Assistant Secretary of Minerals Technologies Inc. (the "Company"), acting singly, with full power of substitution, as the undersigned's true and lawful attorneys-in-fact and agents to:

(1) execute for and on behalf of the undersigned, in the undersigned's capacity as an officer and/or director of the Company, all documents, certificates, instruments, statements, filings and agreements ("documents") to be filed with or delivered in accordance with the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations thereunder;

(2) do and perform any and all acts for and on behalf of the undersigned that may be necessary or desirable to complete and execute and timely file any such documents with the United States Securities and Exchange Commission (the "SEC") and any stock exchange or similar authority; and

(3) take any other action of any type whatsoever that, in the opinion of such attorneys-in-fact, may be necessary or desirable in connection with the foregoing authority, it being understood that the documents executed by such attorneys-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorneys-in-fact may approve.

The undersigned hereby grants to such attorneys-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorneys-in-fact substitute or substitutes, have lawfully done or cause to be done or shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming any of the undersigned's responsibilities to comply with the Securities Act and the Exchange Act.

All pre-existing Powers of Attorney granted to the persons designated above are hereby revoked. This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file documents under the Securities Act and the Exchange Act with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact. This Power of Attorney may be filed with the SEC as a confirming statement of the authority granted herein.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this \_\_ day of \_\_\_\_\_, \_\_\_\_.

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/s/ Paula H.J. Cholmondeley  
Paula H. J. Cholmondeley

Dated: June 15, 2009

/s/ Robert L. Clark  
Robert L. Clark

Dated: November 9, 2009

/s/ Duane R. Dunham  
Duane R. Dunham

Dated: June 15, 2009

/s/ Steven J. Golub  
Steven J. Golub

Dated: June 15, 2009

/s/ Michael F. Pasquale  
Michael F. Pasquale

Dated: June 13, 2009

/s/ Marc E. Robinson  
Marc E. Robinson

Dated: December 1, 2011

/s/ Barbara Smith  
Barbara Smith

Dated: April 22, 2011



**RULE 13a-14(a)/15d-14(a) CERTIFICATION**

I, Joseph C. Muscari, certify that:

1. I have reviewed this Annual Report on Form 10-K of Minerals Technologies Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2013

**/s/Joseph C. Muscari**

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Joseph C. Muscari  
Chairman of the Board  
and Chief Executive Officer

**RULE 13a-14(a)/15d-14(a) CERTIFICATION**

I, Douglas T. Dietrich, certify that:

1. I have reviewed this Annual Report on Form 10-K of Minerals Technologies Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and (the registrant's fourth fiscal quarter in the case of an annual report)
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2013

**/s/Douglas T. Dietrich**

Douglas T. Dietrich  
Senior Vice President - Finance and Treasury,  
Chief Financial Officer

**SECTION 1350 CERTIFICATION**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18, United States Code), each of the undersigned officers of Minerals Technologies Inc., a Delaware corporation (the "Company"), does hereby certify that:

The Annual Report on Form 10-K for the year ended December 31, 2012 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 22, 2013

**/s/ Joseph C. Muscari**

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Joseph C. Muscari  
Chairman of the Board and  
Chief Executive Officer

Dated: February 22, 2013

**/s/ Douglas T. Dietrich**

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Douglas T. Dietrich  
Senior Vice President-Finance and Treasury,  
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to Exchange Act Rule 13a-14(b); is not deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section; and is not deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act of 1934.

Section 1503 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K contain certain reporting requirements regarding coal or other mine safety. The Company, through its subsidiaries Specialty Minerals Inc. and Barretts Minerals Inc., operates six mines in the United States. The operation of our mines is subject to regulation by the federal Mine Safety and Health Administration ("MSHA") under the Federal Mine Safety and Health Act of 1977 (the "Mine Act"). MSHA inspects our mines on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act.

The following table sets forth the required information with respect to each mine for which we are the operator for the period January 1, 2012 to December 31, 2012 (number of occurrences, except for proposed assessment dollar values):

Mine	Section 104(a)		Section		Section 107(a) Proposed Assessments	Fatalities	
	S&S	Section 104(b)	Section 104(d)	110(b)(2)			
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
Lucerne Valley, CA	0	0	0	0	0	\$0	0
Canaan, CT	1	0	0	0	0	\$1438	0
Adams, MA	7	0	0	0	0	\$8932	0
Barretts Mill, Dillon, MT	8	0	0	0	0	\$2145*	0
Regal Mine, Dillon, MT	0	0	0	0	0	\$0	0
Treasure Mine, Dillon, MT	0	0	0	0	0	\$200	0

\* As of the date of this report, we have not received proposed assessments for certain additional violations issued during this period for this location

- (A) The total number of violations of mandatory health or safety standards that could significantly and substantially contribute to the cause and effect of a mine safety or health hazard under section 104 of the Mine Act for which we received a citation from MSHA.
- (B) The total number of orders issued under section 104(b) of the Mine Act.
- (C) The total number of citations and orders for unwarrantable failure of the Company to comply with mandatory health or safety standards under section 104(d) of the Mine Act.
- (D) The total number of flagrant violations under section 110(b)(2) of the Mine Act.
- (E) The total number of imminent danger orders issued under section 107(a) of the Mine Act.
- (F) The total dollar value of proposed assessments from MSHA under the Mine Act.
- (G) The total number of mining-related fatalities, other than fatalities determined by MSHA to be unrelated to mining activity.

During the period January 1, 2012 to December 31, 2012, we did not receive any written notice from MSHA, with respect to any mine for which we are the operator, of (A) a pattern of violations of mandatory health or safety standards that are of such nature as could have significantly and substantially contributed to the cause and effect of mine health and safety hazards under section 104(e) of the Mine Act or (B) the potential to have such a pattern.

The following table sets forth the required information with respect to legal actions before the Federal Mine Safety and Health Review Commission involving each mine for which we are the operator for the period January 1, 2012 to December 31, 2012 (number of actions):

Mine	Legal Actions Pending As Of Last	Legal Actions Initiated During	Legal Actions Resolved During
	Day Of Period	Period	Period
Lucerne Valley, CA(1)	0	4	15
Canaan, CT	0	0	0
Adams, MA	3	9	6
Barretts Mill, Dillon, MT	3	3	0
Regal Mine, Dillon, MT	0	0	0
Treasure Mine, Dillon, MT	0	0	0

(1) Each legal action pending as of the last day of the period is a contest of citations and orders, as referenced in Subpart B of 29 CFR Part 2700. For each such legal action, we have requested, in the alternative, a reduction of the proposed penalties, as referenced in Subpart C of 29 CFR Part 2700.

