

MATERION Corp
Form 10-K
February 29, 2012
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

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

For the Fiscal Year Ended December 31, 2011

OR

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 1-15885

MATERION CORPORATION

(Exact name of Registrant as specified in its charter)

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Ohio
(State or other jurisdiction of
incorporation or organization)
6070 Parkland Blvd.,
Mayfield Heights, Ohio
(Address of principal executive offices)
Registrant's telephone number, including area code

34-1919973
(I.R.S. Employer
Identification No.)
44124
(Zip Code)
216-486-4200

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, no par value	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 the registrant is not required to file reports pursuant to Section 13 or Section 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 (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of 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. (Check one):

Large accelerated filer Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company) 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

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The aggregate market value of Common Stock, no par value, held by non-affiliates of the registrant (based upon the closing sale price on the New York Stock Exchange) on July 1, 2011 was \$759,586,247.

As of February 14, 2012, there were 20,412,182 common shares, no par value, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the proxy statement for the annual meeting of shareholders to be held on May 2, 2012 are incorporated by reference into Part III.

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MATERION CORPORATION

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Year Ended December 31, 2011

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Forward-looking Statements

Portions of the narrative set forth in this document that are not statements of historical or current facts are forward-looking statements. Our actual future performance may materially differ from that contemplated by the forward-looking statements as a result of a variety of factors. These factors include, in addition to those mentioned elsewhere herein:

The global economy;

The condition of the markets which we serve, whether defined geographically or by segment, with the major market segments being: consumer electronics, industrial components and commercial aerospace, defense and science, energy, medical, automotive electronics, telecommunications infrastructure and appliance;

Changes in product mix and the financial condition of customers;

Actual sales, operating rates and margins for 2012;

Our success in developing and introducing new products and new product ramp-up rates;

Our success in passing through the costs of raw materials to customers or otherwise mitigating fluctuating prices for those materials, including the impact of fluctuating prices on inventory values;

Our success in integrating acquired businesses, including EIS Optics Limited;

Our success in implementing our strategic plans and the timely and successful completion and start-up of any capital projects, including the new primary beryllium facility in Elmore, Ohio;

The availability of adequate lines of credit and the associated interest rates;

The impact of the results of acquisitions on our ability to achieve fully the strategic and financial objectives related to these acquisitions;

Other financial factors, including the cost and availability of raw materials (both base and precious metals), physical inventory valuations, metal financing fees, tax rates, exchange rates, pension costs and required cash contributions and other employee benefit costs, energy costs, regulatory compliance costs, the cost and availability of insurance, and the impact of the Company's stock price on the cost of incentive compensation plans;

The uncertainties related to the impact of war, terrorist activities and acts of God;

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Changes in government regulatory requirements and the enactment of new legislation that impacts our obligations and operations;

The conclusion of pending litigation matters in accordance with our expectation that there will be no material adverse effects;

The timing and ability to achieve further efficiencies and synergies resulting from our name change and product line alignment under the Materion name and Materion brand; and

The risk factors set forth elsewhere in Item 1A of this Form 10-K.

Item 1. BUSINESS

Materion Corporation, through its wholly owned subsidiaries, is an integrated producer of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications. Our products are sold into numerous markets, including consumer electronics, industrial components and commercial aerospace, defense and science, energy, medical, automotive electronics, telecommunications infrastructure and appliance. As of December 31, 2011, we had 3,015 employees.

In the first quarter 2011, we changed the name of our Company to Materion Corporation. The names of all of our active subsidiaries were changed at that time and each subsidiary has Materion as part of its name. The legal and ownership structure of our subsidiaries remains unchanged.

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This name change did not alter our senior management structure or how the chief decision maker evaluates the performance of our businesses. We continue to have the same four reportable segments as we had previously with no change in their make up, although the names of those segments have changed. Advanced Material Technologies and Services has been revised to Advanced Material Technologies, Specialty Engineered Alloys is now known as Performance Alloys, Beryllium and Beryllium Composites has been shortened to Beryllium and Composites, and Engineered Material Systems has been changed to Technical Materials.

All Other includes our parent company expenses, other corporate charges and the operating results of Materion Services Inc., a wholly owned subsidiary that provides administrative and financial oversight services to our other businesses on a cost-plus basis. Corporate employees not included in a reportable segment totaled 100 as of December 31, 2011.

We use our Investor Relations web site, <http://materion.com/>, as a channel for routine distribution of important information, including news releases, analyst presentations, and financial information. We post filings as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC, including our annual, quarterly, and current reports on Forms 10-K, 10-Q, and 8-K; our proxy statements; and any amendments to those reports or statements. All such postings and filings are available on our Investor Relations web site free of charge. In addition, this web site allows investors and other interested persons to sign up to automatically receive e-mail alerts when we post news releases and financial information on our web site. The SEC also maintains a web site, www.sec.gov, that contains reports, proxy and information statements, and other information regarding issuers who file electronically with the SEC. The content on any web site referred to in this Annual Report on Form 10-K is not incorporated by reference into this Form 10-K unless expressly noted.

ADVANCED MATERIAL TECHNOLOGIES

Sales for this segment were \$1,051.8 million, or 69% of total sales, in 2011; \$879.0 million, or 67% of total sales, in 2010 and \$460.8 million, or 64% of total sales, in 2009. As of December 31, 2011, Advanced Material Technologies had 1,566 employees.

Advanced Material Technologies manufactures precious, non-precious and specialty metal products, including vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high temperature braze materials, ultra-fine wire, advanced chemicals, optics, performance coatings and microelectronic packages. These products are used in wireless, semiconductor, photonic, hybrid and other microelectronic applications within the consumer electronics and telecommunications infrastructure markets. Other key markets for these products include medical, defense and science, energy and industrial components. Advanced Material Technologies also has metal cleaning operations and in-house refineries that allow for the reclaim of precious metals from internally generated or customers' scrap.

Advanced Material Technologies' products are sold directly from its facilities throughout the U.S., Asia and Europe, as well as through direct sales offices and independent sales representatives throughout the world. Principal competition includes companies such as Sumitomo Metals, Heraeus Inc., Praxair, Inc., Honeywell International Inc., Solar Applied Materials Technology Corp., Tanaka Holding Co., Ltd., Johnson Matthey plc and a number of smaller regional and national suppliers.

Advanced Material Technologies Sales and Backlog

The backlog of unshipped orders for Advanced Material Technologies as of December 31, 2011, 2010 and 2009 was \$75.5 million, \$55.4 million and \$51.3 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2011 will be filled during 2012.

Sales are made to over 3,200 customers. Government sales accounted for less than 1% of the sales volume in 2011, 2010 and 2009. Sales outside the United States, principally to Europe and Asia, accounted for

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approximately 16% of sales in 2011, 19% of sales in 2010 and 29% of sales in 2009. Other segment reporting and geographic information is contained in Note M to the Consolidated Financial Statements, which can be found in Item 8 of this Form 10-K and which is incorporated herein by reference.

Advanced Material Technologies Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations. Expenditures for research and development for Advanced Material Technologies amounted to \$6.7 million in 2011, \$4.0 million in 2010 and \$3.2 million in 2009. A staff of 51 scientists, engineers and technicians was employed in this effort as of year-end 2011.

PERFORMANCE ALLOYS

Sales for this segment were \$335.3 million, or 22% of total sales, in 2011; \$293.8 million, or 23% of total sales, in 2010 and \$172.5 million, or 24% of total sales, in 2009. As of December 31, 2011, Performance Alloys had 913 employees.

Performance Alloys manufactures and sells three main product families: strip products, bulk products and beryllium hydroxide. Strip products, the larger of the product families, include thin gauge precision strip and thin diameter rod and wire. These copper and nickel beryllium alloys provide a combination of high conductivity, high reliability and formability for use as connectors, contacts, switches, relays and shielding. Major markets for strip products include consumer electronics, telecommunications infrastructure, automotive electronics, appliance and medical. Performance Alloys' primary direct competitor in strip form beryllium alloys is NGK Insulators, Ltd. of Nagoya, Japan, with subsidiaries in the United States and Europe. Performance Alloys also competes with alloy systems manufactured by Global Brass and Copper, Inc., Wieland Electric, Inc., Stolberger Metallwerke GmbH, Nippon Mining, PMX Industries, Inc. and also with other generally less expensive materials, including phosphor bronze, stainless steel and other specialty copper and nickel alloys, which are produced by a variety of companies around the world.

Bulk products are copper and nickel-based alloys manufactured in plate, rod, bar, tube and other customized forms that, depending upon the application, may provide superior strength, corrosion or wear resistance, thermal conductivity or lubricity. While the majority of bulk products contain beryllium, a growing portion of bulk products' sales is from non-beryllium-containing alloys as a result of product diversification efforts. Applications for bulk products include oil and gas drilling components, bearings, bushings, welding rods, plastic mold tooling, and undersea telecommunications housing equipment. In the area of bulk products, in addition to NGK Insulators, Ltd., Performance Alloys competes with several smaller regional producers such as International Beryllium Corp., Ningxia Orient Tantalum in China and LeBronze Industriel in Europe.

Beryllium hydroxide is produced at our milling operations in Utah from our bertrandite mine and purchased beryl ore. The hydroxide is used primarily as a raw material input for strip and bulk products and, to a lesser extent, by the Beryllium and Composites segment. External sales of hydroxide from the Utah operations were less than 4% of Performance Alloys' total sales in each of the three most recent years. We sell beryllium hydroxide to NGK Insulators, Ltd.

Strip and bulk products are manufactured at facilities in Ohio and Pennsylvania and are distributed internationally through a network of company-owned service centers and outside distributors and agents.

Performance Alloys Sales and Backlog

The backlog of unshipped orders for Performance Alloys as of December 31, 2011, 2010 and 2009 was \$99.6 million, \$98.9 million and \$68.6 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all the backlog of orders for this segment as of December 31, 2011 will be filled during 2012.

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Sales are made to over 1,600 customers. Performance Alloys had government sales accounting for less than 1% of segment sales in 2011, 2010 and 2009. Sales outside the United States, principally to Europe and Asia, accounted for approximately 51% of sales in 2011, 58% of sales in 2010 and 57% of sales in 2009. Other segment reporting and geographic information is contained in Note M to the Consolidated Financial Statements, which can be found in Item 8 of this Form 10-K and which is incorporated herein by reference.

Performance Alloys Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations. Expenditures for research and development amounted to \$2.1 million in 2011, \$1.8 million in 2010 and \$2.2 million in 2009. A staff of seven scientists, engineers and technicians was employed in this effort as of year-end 2011.

BERYLLIUM AND COMPOSITES

Sales for this segment were \$60.6 million, or 4% of total sales, in 2011; \$61.9 million, or 5% of total sales, in 2010 and \$47.0 million, or 7% of total sales, in 2009. As of December 31, 2011, Beryllium and Composites had 245 employees.

Beryllium and Composites manufactures beryllium-based metals and metal matrix composites in rod, sheet, foil and a variety of customized forms at the Elmore, Ohio and Fremont, California facilities. These materials are used in applications that require high stiffness and/or low density and they tend to be premium-priced due to their unique combination of properties. This segment also manufactures beryllia ceramics produced at the Tucson, Arizona facility. Defense and science is the largest market for Beryllium and Composites, while other markets served include industrial components and commercial aerospace, medical, energy and telecommunications infrastructure. Products are also sold for acoustics and optical scanning applications. A majority of defense sales are made to contractors and subcontractors instead of directly to government entities. In June 2008, we announced that Materion Brush Inc. had entered into an agreement with the Department of Defense to construct a \$100 million primary beryllium facility. Construction of this facility, which was designed to produce primary beryllium, the feedstock material used to produce beryllium metal products, was completed in 2011. In the first quarter of 2012, the start-up of the facility was ongoing, but the Company expects the facility to reach capacity levels in excess of 2012 demand levels. Beryllium-containing products are sold throughout the world through a direct sales organization and through company-owned and independent distribution centers. While Beryllium and Composites is the only domestic producer of metallic beryllium, it competes primarily with designs utilizing other materials including metals, metal matrix and organic composites. Electronic components utilizing beryllia are used in the telecommunications infrastructure, medical, industrial components and commercial aerospace, and defense and science markets. These products are distributed through direct sales and independent sales agents. Direct competitors include American Beryllia Inc. and CBL Ceramics Limited.

Beryllium and Composites Sales and Backlog

The backlog of unshipped orders for Beryllium and Composites as of December 31, 2011, 2010 and 2009 was \$16.9 million, \$26.1 million and \$38.1 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2011 will be filled during 2012.

Sales are made to over 300 customers. Government sales accounted for less than 1% of Beryllium and Composites sales in 2011, and less than 2% of sales in 2010 and 2009. Sales outside the United States, principally to Europe and Asia, accounted for approximately 28% of sales in 2011, and 22% of sales in 2010 and 2009. Other segment reporting and geographic information is contained in Note M to the Consolidated Financial Statements, which can be found in Item 8 of this Form 10-K and which is incorporated herein by reference.

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Beryllium and Composites Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations. Expenditures for research and development amounted to \$2.2 million in 2011, \$1.3 million in 2010 and \$1.4 million in 2009. A staff of eight scientists, engineers and technicians was employed in this effort as of year-end 2011. Some research and development projects, expenditures for which are not material, were externally sponsored and funded.

TECHNICAL MATERIALS

Sales for this segment were \$78.7 million, or 5% of total sales, in 2011; \$67.5 million, or 5% of total sales, in 2010 and \$34.7 million, or 5% of total sales, in 2009. As of December 31, 2011, Technical Materials had 191 employees.

Technical Materials' capabilities include clad inlay and overlay metals, precious and base metal electroplated systems, electron beam welded systems, contour profiled systems and solder-coated metal systems. These specialty strip metal products provide a variety of thermal, electrical or mechanical properties from a surface area or particular section of the material. Our cladding and plating capabilities allow for a precious metal or other base metals to be applied in continuous strip form only where it is needed, reducing the material cost to the customer as well as providing design flexibility and performance. Major applications for these products include connectors, contacts, power lead frames and semiconductors while the largest markets are automotive electronics and consumer electronics. The energy and medical markets offer further growth opportunities. Technical Materials' products are manufactured at our Lincoln, Rhode Island facility and sold directly and through its sales representatives. Technical Materials' major competitors include Heraeus Inc., AMI Doduco, Inc. and other North American continuous strip plating companies.

Technical Materials Sales and Backlog

The backlog of unshipped orders for Technical Materials as of December 31, 2011, 2010 and 2009 was \$16.3 million, \$16.3 million and \$7.6 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2011 will be filled during 2012.

Sales are made to over 200 customers. Technical Materials did not have any sales to the government for 2011, 2010 or 2009. Sales outside the United States, principally to Europe and Asia, accounted for approximately 27% of Technical Materials' sales in 2011, 26% of sales in 2010 and 21% of sales in 2009. Other segment reporting and geographic information is contained in Note M to the Consolidated Financial Statements, which can be found in Item 8 of this Form 10-K and which is incorporated herein by reference.

Technical Materials Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations. Expenditures for research and development for Technical Materials were nominal in 2011, 2010 and 2009.

GENERAL

Availability of Raw Materials

The principal raw materials we use are aluminum, beryllium, cobalt, copper, gold, nickel, palladium, platinum, ruthenium, silver and tin. Ore reserve data can be found in Item 7 of this Form 10-K. The availability of these raw materials, as well as other materials used by us, is adequate and generally not dependent on any one supplier.

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Patents and Licenses

We own patents, patent applications and licenses relating to certain of our products and processes. While our rights under the patents and licenses are of some importance to our operations, our business is not materially dependent on any one patent or license or on all of our patents and licenses as a group.

Regulatory Matters

We are subject to a variety of laws that regulate the manufacture, processing, use, handling, storage, transport, treatment, emission, release and disposal of substances and wastes used or generated in manufacturing. For decades we have operated our facilities under applicable standards of inplant and outplant emissions and releases. The inhalation of airborne beryllium particulate may present a health hazard to certain individuals.

Standards for exposure to beryllium are under review by the U.S. Occupational Safety and Health Administration (OSHA) and by other governmental and private standard-setting organizations. One result of these reviews will likely be more stringent worker safety standards. Some organizations, such as the California Occupational Health and Safety Administration and the American Conference of Governmental Industrial Hygienists, have adopted standards that are more stringent than the current standards of OSHA. The development, proposal or adoption of more stringent standards may affect buying decisions by the users of beryllium-containing products. If the standards are made more stringent and/or our customers or other downstream users decide to reduce their use of beryllium-containing products, our results of operations, liquidity and financial condition could be materially adversely affected. The impact of this potential adverse effect would depend on the nature and extent of the changes to the standards, the cost and ability to meet the new standards, the extent of any reduction in customer use and other factors. The magnitude of this potential adverse effect cannot be estimated.

Executive Officers of the Registrant

Name	Age	Positions and Offices
Richard J. Hipple	59	<i>Chairman of the Board, President and Chief Executive Officer.</i> In May 2006, Mr. Hipple was named Chairman of the Board and Chief Executive Officer of Materion Corporation. He had served as President since May 2005. He was Chief Operating Officer from May 2005 until May 2006. Mr. Hipple served as President of Performance Alloys from May 2002 until May 2005. He joined the Company in July 2001 as Vice President of Strip Products, Performance Alloys and served in that position until May 2002. Prior to joining Materion, Mr. Hipple was President of LTV Steel Company, a business unit of the LTV Corporation (integrated steel producer and metal fabricator). Prior to running LTV's steel business, Mr. Hipple held numerous leadership positions in engineering, operations, strategic planning, sales and marketing and procurement since 1975 at LTV. Mr. Hipple has served on the Board of Directors of Ferro Corporation since 2007 and as its Lead Director since April 2010.
John D. Grampa	64	<i>Senior Vice President Finance and Chief Financial Officer.</i> Mr. Grampa was named Senior Vice President Finance and Chief Financial Officer in December 2006. Prior to that, he had served as Vice President Finance and Chief Financial Officer since November 1999 and as Vice President Finance since October 1998. Prior to that, he had served as Vice President, Finance for the Worldwide Materials Business of Avery Dennison Corporation (producer of pressure sensitive materials, office products, labels and other converted products) since March 1994 and held other various positions at Avery Dennison Corporation from 1984.

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Name	Age	Positions and Offices
Daniel A. Skoch	62	<u>Senior Vice President Administration.</u> Mr. Skoch was named Senior Vice President Administration in July 2000. Prior to that time, he had served as Vice President Administration and Human Resources since March 1996. He had served as Vice President Human Resources since July 1991 and prior to that time, he was Corporate Director Personnel.
Gregory R. Chemnitz	54	<u>Vice President, General Counsel.</u> Mr. Chemnitz joined Materion Corporation in September 2007 as its Vice President, General Counsel. Prior to that, he had served in various roles in the Law Department at Avery Dennison Corporation beginning in 1992, including most recently, as Assistant General Counsel, Americas, where he had responsibility for the legal affairs of Avery Dennison's business units in North and South America.

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Item 1A. RISK FACTORS

Our business, financial condition, results of operations and cash flows can be affected by a number of factors, including, but not limited to, those set forth below and elsewhere in this Form 10-K, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results. Therefore, an investment in us involves some risks, including the risks described below. The risks discussed below are not the only risks that we may experience. If any of the following risks occur, our business, results of operations or financial condition could be negatively impacted.

Natural disasters, equipment failures, work stoppages, bankruptcies and other unexpected events may lead our customers to curtail production or shut down their operations.

Our customers' manufacturing operations are subject to conditions beyond their control, including raw material shortages, natural disasters, interruptions in electrical power or other energy services, equipment failures, bankruptcies, work stoppages due to strikes or lockouts, including those affecting the automotive industry, which is one of our major markets, and other unexpected events. For example, the tsunami that hit Japan in March 2011 caused wide-scale destruction of the Tohoku region and led most manufacturers in the area, most notably those in the automotive and consumer electronics markets, to slow or halt production. Similar events could also affect other suppliers to our customers. Such events could cause our customers to curtail production or to shut down a portion or all of their operations, which could reduce their demand for our products and reduce our sales.

Unexpected events and natural disasters at our mine could increase the cost of operating our business.

A portion of our production costs at our mine are fixed regardless of current operating levels. Our operating levels are subject to conditions beyond our control that may increase the cost of mining for varying lengths of time. These conditions include, among other things, fire, natural disasters, pit wall failures and ore processing changes. Our mining operations also involve the handling and production of potentially explosive materials. It is possible that an explosion could result in death and injuries to employees and others and material property damage to third parties and us. Any explosion could expose us to adverse publicity or liability for damages and materially adversely affect our operations. Any of these events could increase our cost of operations.

We have a limited number of manufacturing facilities, and damage to those facilities could interrupt our operations, increase our costs of doing business and impair our ability to deliver our products on a timely basis.

Some of our facilities are interdependent. For instance, our manufacturing facility in Elmore, Ohio relies on our mining operation for its supply of beryllium hydroxide used in production of most of its beryllium-containing materials. Additionally, our Reading, Pennsylvania; Fremont, California and Tucson, Arizona manufacturing facilities are dependent on materials produced by our Elmore, Ohio manufacturing facility and our Wheatfield, New York manufacturing facility is dependent on our Buffalo, New York manufacturing facility. See Item 2 of this Form 10-K. The destruction or closure of any of our manufacturing facilities or our mine for a significant period of time as a result of fire, explosion, act of war or terrorism or other natural disaster or unexpected event may interrupt our manufacturing capabilities, increase our capital expenditures and our costs of doing business and impair our ability to deliver our products on a timely basis. In such an event, we may need to resort to an alternative source of manufacturing or to delay production, which could increase our costs of doing business. Our property damage and business interruption insurance may not cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all.

Equipment failures and other unexpected events at our facilities may lead to manufacturing curtailments or shutdowns.

The manufacturing processes that take place in our mining operation, as well as in our manufacturing facilities, depend on critical pieces of equipment. This equipment may, on occasion, be out of service because of unanticipated failure, and some equipment is not readily available or replaceable. In addition to equipment

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failures, our facilities are also subject to the risk of loss due to unanticipated events such as fires, explosions or other disasters. Material plant shutdowns or reductions in operations could harm our ability to fulfill our customers' demands, which could harm our sales and cause our customers to find other suppliers. Further, remediation of any interruption in production capability may require us to make large capital expenditures, which may have a negative effect on our profitability and cash flows. Our business interruption insurance may not cover all of the lost revenues associated with interruptions in our manufacturing capabilities.

Future terrorist attacks and other acts of violence or war may directly harm our operations.

Future terrorist attacks or other acts of violence or war may directly impact our facilities. For example, our Elmore, Ohio facility is located near, and derives power from, a nuclear power plant, which could be a target for a terrorist attack. In addition, future terrorist attacks, related armed conflicts or prolonged or increased tensions in the Middle East or other regions of the world could cause consumer confidence and spending to decrease, decreasing demand for consumer goods that contain our products. Further, when the United States armed forces are involved in active hostilities or large-scale deployments, defense spending tends to focus more on meeting the physical needs of the troops, and planned expenditures on weapons and other systems incorporating our products may be reduced or deferred. Any of these occurrences could also increase volatility in the United States and worldwide financial markets, which could negatively impact our sales.

Many of our manufacturing facilities are dependent on single source energy suppliers, and interruption in energy services may cause manufacturing curtailments or shutdowns.

Many of our manufacturing facilities depend on one source for electric power and for natural gas. For example, Utah Power is the sole supplier of electric power to the processing facility for our mining operations in Utah. A significant interruption in service from our energy suppliers due to equipment failures, terrorism or any other cause may result in substantial losses that are not fully covered by our business interruption insurance. Any substantial unmitigated interruption of our operations due to these conditions could harm our ability to meet our customers' demands and reduce our sales.

If the price of electrical power, fuel or other energy sources increases, our operating expenses could increase significantly.

We have numerous milling and manufacturing facilities and a mining operation, which depend on electrical power, fuel or other energy sources. See Item 2 of this Form 10-K. Our operating expenses are sensitive to changes in electricity prices and fuel prices, including natural gas prices. Prices for electricity and natural gas may increase and can fluctuate widely with availability and demand levels from other users. During periods of peak usage, supplies of energy may be curtailed, and we may not be able to purchase energy at historical market rates. While we have some long-term contracts with energy suppliers, we are exposed to fluctuations in energy costs that can affect our production costs. Although we enter into forward-fixed price supply contracts for natural gas and electricity for use in our operations, those contracts are of limited duration and do not cover all of our fuel or electricity needs. Price increases in fuel and electricity costs, such as those increases which may occur from climate change legislation or other environmental mandates, may increase our cost of operations.

The availability and prices of some raw materials we use in our manufacturing operations fluctuate, and increases in raw material costs can adversely affect our operating results and our financial condition.

We manufacture advanced engineered materials using various precious and non-precious metals, including aluminum, beryllium, cobalt, copper, gold, nickel, palladium, platinum, ruthenium, silver and tin. The availability of, and prices for, these raw materials are subject to volatility and are influenced by worldwide economic conditions, speculative action, world supply and demand balances, inventory levels, availability of substitute metals, the U.S. dollar exchange rate, production costs of United States and foreign competitors, anticipated or perceived shortages and other factors. Precious metal prices, including prices for gold and silver,

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have increased significantly in recent years. These higher prices can cause adjustments to our inventory carrying values, whether a result of quantity discrepancies, normal manufacturing losses, differences in scrap rates, theft or other factors, to have a greater impact on our profitability and cash flows. Also, the price of our products has increased in tandem with the rising metal prices, as a result of pass through, which could deter customers from purchasing our products and adversely affect our sales.

Further, we maintain some precious metals on a consigned inventory basis. The owners of the precious metals charge a fee that fluctuates based on the market price of those metals and other factors. A significant increase in the market price of precious metals or the consignment fee could increase our financing costs, which could increase our operating costs.

We are dependent on the successful scheduled start-up of our new primary beryllium facility for our future supply of pure beryllium.

We have partnered with the Department of Defense to share in the cost of a new beryllium plant for primary beryllium feedstock. We may experience quality and/or production issues in the start-up of this new facility. Any prolonged delays of pure beryllium production from the new plant could negatively impact our business.

The project is behind the original planned completion date. Construction is now complete, and we are successfully in low-rate initial production, but any delay in further transitioning the operation to run at required production levels could negatively impact our business as would unexpected quality problems in qualifying the new beryllium feedstock in our beryllium metal product lines.

The availability of competitive substitute materials for beryllium-containing products may reduce our customers demand for these products and reduce our sales.

In certain product applications, we compete with manufacturers of non-beryllium-containing products, including organic composites, metal alloys or composites, titanium and aluminum. Our customers may choose to use substitutes for beryllium-containing products in their products for a variety of reasons, including, among other things, the lower costs of those substitutes, the health and safety concerns relating to these products and the risk of litigation relating to beryllium-containing products. If our customers use substitutes for beryllium-containing products in their products, the demand for our beryllium-containing products may decrease, which could reduce our sales.

The markets for our products are experiencing rapid changes in technology.

We operate in markets characterized by rapidly changing technology and evolving customer specifications and industry standards. New products may quickly render an existing product obsolete and unmarketable. For example, for many years thermal and mechanical performance have been at the forefront of device packaging for wireless communications infrastructure devices. In recent years, a tremendous effort has been put into developing simpler packaging solutions composed of copper and other similar components. Our growth and future results of operations depend in part upon our ability to enhance existing products and introduce newly developed products on a timely basis that conform to prevailing and evolving industry standards, meet or exceed technological advances in the marketplace, meet changing customer specifications, achieve market acceptance and respond to our competitors products.

The process of developing new products can be technologically challenging and requires the accurate anticipation of technological and market trends. We may not be able to introduce new products successfully or do so on a timely basis. If we fail to develop new products that are appealing to our customers or fail to develop products on time and within budgeted amounts, we may be unable to recover our research and development costs, which could adversely affect our margins and profitability.

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Our products are deployed in complex applications and may have errors or defects that we find only after deployment.

Our products are highly complex, designed to be deployed in complicated applications and may contain undetected defects, errors or failures. Although our products are generally tested during manufacturing, prior to deployment, they can only be fully tested when deployed in specific applications. For example, we sell beryllium-copper alloy strip products in a coil form to some customers, who then stamp the alloy for its specific purpose. On occasion, it is not until such customer stamps the alloy that a defect in the alloy is detected. Consequently, our customers may discover errors after the products have been deployed. The occurrence of any defects, errors, or failures could result in installation delays, product returns, termination of contracts with our customers, diversion of our resources, increased service and warranty costs and other losses to our customers, end users or to us. Any of these occurrences could also result in the loss of, or delay in, market acceptance of our products and could damage our reputation, which could reduce our sales.

Our lengthy and variable sales and development cycle makes it difficult for us to predict if and when a new product will be sold to customers.

Our sales and development cycle, which is the period from the generation of a sales lead or new product idea through the development of the product and the recording of sales, may typically take up to two or three years, making it very difficult to forecast sales and results of operations. Our inability to accurately predict the timing and magnitude of sales of our products, especially newly introduced products, could affect our ability to meet our customers' product delivery requirements or cause our results of operations to suffer if we incur expenses in a particular period that do not translate into sales during that period, or at all. In addition, these failures would make it difficult to plan future capital expenditure needs and could cause us to fail to meet our cash flow requirements.

Our business could be adversely impacted if we fail to adequately address security issues.

We have taken measures to protect the integrity of our technology infrastructure and the privacy of confidential information. However, our technology infrastructure is potentially vulnerable to physical or electronic break-ins, viruses or similar problems. If a person or entity circumvents our security measures, they could jeopardize the security of confidential information stored on our systems, misappropriate proprietary information or cause interruptions in our operations. We may be required to make substantial additional investments and efforts to protect against or remedy security breaches. Security breaches that result in access to confidential information could damage our reputation and expose us to a risk of loss or liability.

A portion of our revenue is derived from the sale of defense-related products through various contracts and subcontracts. These contracts may be suspended or canceled, which could have an adverse impact on our revenues.

In 2011, 11% of our revenue was derived from sales to customers in the defense and science market. A portion of these customers operate under contracts with the U.S. Government, which are vulnerable to termination at any time, for convenience or default. Some of the reasons for cancellation include, but are not limited to, budgetary constraints or re-appropriation of government funds, timing of contract awards, violations of legal or regulatory requirements, and changes in political agenda. If cancellations were to occur, it would result in a reduction in our revenue. For example, various projects, including the F-22 fighter aircraft, have been canceled, which had, and will have, a negative impact on our revenue. In addition, any decreases in the defense budget that may be enacted could have an adverse impact on some of our operations.

The global economic crisis that began in 2008 had, and any additional negative or uncertain worldwide economic conditions may have, a negative impact on our financial performance.

The global economic crisis adversely affected the global economy. Some customers experienced difficulty in obtaining adequate financing due to the disruption in the credit markets, which has impacted our sales. Our

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exposure to bad debt losses may also increase if customers are unable to pay for products previously ordered. This recession has also caused higher unemployment rates globally, which could have an adverse impact on demand for consumer electronics, which comprised 38% of our sales in 2011. Any additional negative or uncertain financial and macroeconomic conditions may have a significant adverse impact on our sales, profitability and results of operations. For example, if the current economic crisis in Europe escalates, it could trigger a global economic downturn similar to the one experienced in 2008 and 2009. This could have a negative impact on our sales to Europe, which accounted for approximately 10% of our sales in 2011.

The businesses of many of our customers are subject to significant fluctuations as a result of the cyclical nature of their industries and their sensitivity to general economic conditions, which could adversely affect their demand for our products and reduce our sales and profitability.

A substantial number of our customers are in the consumer electronics, telecommunications infrastructure, defense and science, industrial components and commercial aerospace, automotive electronics and appliance industries. Each of these industries is cyclical in nature, influenced by a combination of factors which could have a negative impact on our business, including, among other things, periods of economic growth or recession, strength or weakness of the U.S. dollar, the strength of the consumer electronics, automotive electronics and computer industries and the rate of construction of telecommunications infrastructure equipment and government spending on defense.

Also, in times when growth rates in our markets slow down, there may be temporary inventory adjustments by our customers that may negatively affect our business.

Because we experience seasonal fluctuations in our sales, our quarterly results will fluctuate, and our annual performance will be affected by the fluctuations.

We expect seasonal patterns to continue, which may cause our quarterly results to fluctuate. For example, the Christmas season generates increased demand from our customers that manufacture consumer products. If our revenue during any quarter were to fall below the expectations of investors or securities analysts, our share price could decline, perhaps significantly. Unfavorable economic conditions, lower than normal levels of demand and other occurrences in any of the other quarters could also harm our results of operations. For example, toward the end of 2010, customers were building inventory in anticipation of increased demand, whereas in the same period of 2011 demand decreased because our customers had excess inventory.

We conduct our sales and distribution operations on a worldwide basis and are subject to the risks associated with doing business outside the United States.

We sell to customers outside of the United States from our United States and international operations. We have been and are continuing to expand our geographic reach in Europe and Asia. Shipments to customers outside of the United States accounted for approximately 25% of our sales in 2011, 28% in 2010 and 35% in 2009. We anticipate that international shipments will account for a significant portion of our sales for the foreseeable future. Revenue from international operations (principally Europe and Asia) amounted to approximately 14% of our sales in 2011, 17% in 2010 and 24% in 2009. There are a number of risks associated with international business activities, including:

burdens to comply with multiple and potentially conflicting foreign laws and regulations, including export requirements, tariffs and other barriers, environmental health and safety requirements and unexpected changes in any of these factors;

difficulty in obtaining export licenses from the United States Government;

political and economic instability and disruptions, including terrorist attacks;

disadvantages of competing against companies from countries that are not subject to U.S. laws and regulations, including the Foreign Corrupt Practices Act (FCPA);

potentially adverse tax consequences due to overlapping or differing tax structures; and

fluctuations in currency exchange rates.

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Any of these risks could have an adverse effect on our international operations by reducing the demand for our products or reducing the prices at which we can sell our products, which could result in an adverse effect on our business, financial position, results of operations or cash flows.

In addition, we could be adversely affected by violations of the FCPA and similar worldwide anti-bribery laws. The FCPA and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. Our policies mandate compliance with these anti-bribery laws. We operate in many parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. We cannot assure you that our internal controls and procedures always will protect us from the reckless or criminal acts committed by our employees or agents. If we are found to be liable for FCPA violations, we could suffer from criminal or civil penalties or other sanctions, which could have a material adverse effect on our business.

We are subject to fluctuations in currency exchange rates, which may negatively affect our financial performance.

A significant portion of our sales is conducted in international markets and priced in currencies other than the U.S. dollar. Revenues from customers outside of the United States (principally Europe and Asia) amounted to 25% of sales in 2011, 28% in 2010 and 35% in 2009. A significant part of these international sales are priced in currencies other than the U.S. dollar. Significant fluctuations in currency values relative to the U.S. dollar may negatively affect our financial performance. In the past, fluctuations in currency exchange rates, particularly for the euro and the yen, have impacted our sales, margins and profitability. The fair value of our net asset relating to outstanding foreign currency contracts was \$1.4 million at December 31, 2011, indicating that the average hedge rates were favorable compared to the actual year-end market exchange rates. While we may hedge our currency transactions to mitigate the impact of currency price volatility on our earnings, hedging activities may not be successful. For example, hedging activities may not cover the Company's complete exposure which could have an unfavorable impact on our results of operations.

We may not be able to complete our acquisition strategy or successfully integrate acquired businesses.

We have been active over the last several years in pursuing niche acquisitions. For example, during 2011 we completed the acquisition of EIS Optics Limited. We intend to continue to consider further growth opportunities through the acquisition of assets or companies and routinely review acquisition opportunities. We cannot predict whether we will be successful in pursuing any acquisition opportunities or what the consequences of any acquisition would be. Future acquisitions may involve the expenditure of significant funds and management time. Depending upon the nature, size and timing of future acquisitions, we may be required to raise additional financing, which may not be available to us on acceptable terms. Further, we may not be able to successfully integrate any acquired business with our existing businesses or recognize any expected advantages from any completed acquisition.

In addition, there may be liabilities that we fail, or are unable, to discover in the course of performing due diligence investigations on the assets or companies we have already acquired or may acquire in the future. We cannot assure that rights to indemnification by the sellers of these assets or companies to us, even if obtained, will be enforceable, collectible or sufficient in amount, scope or duration to fully offset the possible liabilities associated with the business or property acquired. Any such liabilities, individually or in the aggregate, could have a materially adverse effect on our business, financial condition and results of operations.

The terms of our indebtedness may restrict our operations, including our ability to pursue our growth and acquisition strategies.

The terms of our credit facilities contain a number of restrictive covenants, including restrictions in our ability to, among other things, borrow and make investments, acquire other businesses and consign additional

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precious metals. These covenants could adversely affect our business by limiting our ability to plan for or react to market conditions or to meet our capital needs, as well as adversely affect our ability to pursue our growth, acquisition strategies and other strategic initiatives.

Our failure to comply with the covenants contained in the terms of our indebtedness could result in an event of default, which could materially and adversely affect our operating results and our financial condition.

The terms of our credit facilities require us to comply with various covenants, including financial covenants. If the global economic downturn returns, it could have a material adverse impact on our earnings and cash flow, which could adversely affect our ability to comply with our financial covenants and could limit our borrowing capacity. Our ability to comply with these covenants depends, in part, on factors over which we may have no control. A breach of any of these covenants could result in an event of default under one or more of the agreements governing our indebtedness which, if not cured or waived, could give the holders of the defaulted indebtedness the right to terminate commitments to lend and cause all amounts outstanding with respect to the indebtedness to be due and payable immediately. Acceleration of any of our indebtedness could result in cross defaults under our other debt instruments. Our assets and cash flow may be insufficient to fully repay borrowings under all of our outstanding debt instruments if some or all of these instruments are accelerated upon an event of default, in which case we may be required to seek legal protection from our creditors.

A major portion of our bank debt consists of variable-rate obligations, which subjects us to interest rate fluctuations.

Our credit facilities are secured by substantially all of our assets (other than non-mining real property and certain other assets). Our working capital line of credit includes variable-rate obligations, which expose us to interest rate risks. If interest rates increase, our debt service obligations on our variable-rate indebtedness would increase even if the amount borrowed remained the same, resulting in a decrease in our net income. We have developed a hedging program to manage the risks associated with interest rate fluctuations, but our program may not effectively eliminate all of the financial exposure associated with interest rate fluctuations. Additional information regarding our market risks is contained in Item 7A of this Form 10-K.

We may be unable to access the financial markets on favorable terms.

The inability to raise capital on favorable terms, particularly during times of uncertainty in the financial markets, could impact our ability to sustain and grow our business and would increase our capital costs. In particular, the substantial volatility in world capital markets due to the global economic crisis has had a significant negative impact on the global financial markets.

We rely on access to financial markets as a significant source of liquidity for capital requirements not satisfied by cash on hand or operating cash flow. Our access to the financial markets could be adversely impacted by various factors, including:

changes in credit markets that reduce available credit or the ability to renew existing credit facilities on acceptable terms;

a deterioration of our credit;

a deterioration in the financial condition of the banks with which we do business;

extreme volatility in our markets that increases margin or credit requirements; and

the collateral pledge of substantially all of our assets in connection with our existing indebtedness, which limits our flexibility in raising additional capital.

These factors have adversely impacted our access to the financial markets from time to time. Negative or uncertain global economic conditions may make it difficult for us to access the credit market and to obtain financing or refinancing, as the case may be, to the extent necessary, on satisfactory terms or at all.

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A lower interest rate environment coupled with less than expected investment performance may require us to increase our pension liability and expense, which may require us to fund a portion of our pension obligations and divert funds from other potential uses.

We provide defined benefit pension plans to eligible employees. Our pension expense and our required contributions to our pension plans are directly affected by the value of plan assets, the projected rate of return on plan assets, the actual rate of return on plan assets and the actuarial assumptions we use to measure our defined benefit pension plan obligations, including the rate at which future obligations are discounted to a present value, or the discount rate. As of January 1, 2012, for pension accounting purposes, we assumed a 7.75% rate of return on pension assets.

Lower investment performance of our pension plan assets resulting from a decline in the stock market could significantly increase the deficit position of our plans. Should the pension asset return fall below our expectations, it is likely that future pension expenses would increase. The actual return on our plan assets for the year ended December 31, 2011 was a loss of approximately 4%.

We establish the discount rate used to determine the present value of the projected and accumulated benefit obligation at the end of each year based upon the available market rates for high quality, fixed income investments. An increase in the discount rate would reduce the future pension expense and, conversely, a lower discount rate would raise the future pension expense.

Based on current guidelines, assumptions and estimates, including stock market prices and interest rates, we anticipate that we will be required to make a cash contribution of approximately \$11.2 million to our pension plan in 2012. If our current assumptions and estimates are not correct, a contribution in 2012 and beyond may be greater than our current or future projections.

We cannot predict whether changing market or economic conditions, regulatory changes or other factors will further increase our pension expenses or funding obligations, diverting funds we would otherwise apply to other uses.

Our expenditures for post-retirement health benefits could be materially higher than we have predicted if our underlying assumptions prove to be incorrect.

We also provide post-retirement health benefits to eligible employees. Our retiree health expense is directly affected by the assumptions we use to measure our retiree health plan obligations, including the assumed rate at which health care costs will increase and the discount rate used to calculate future obligations. For retiree health accounting purposes, we maintained the assumed rate at which health care costs will increase for the next year at 8% for both December 31, 2011 and December 31, 2010. In addition, we have assumed that this health care cost increase trend rate will decline to 5% by 2019.

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one percentage point increase in assumed health care cost trend rates would have increased the post-employment benefit obligation by \$0.8 million at December 31, 2011.

We cannot predict whether changing market or economic conditions, regulatory changes or other factors will further increase our retiree health care expenses or obligations, diverting funds we would otherwise apply to other uses.

Utilizing precious metal in the manufacturing process creates challenges in physical inventory valuations that may impact earnings.

We manufacture precious, non-precious and specialty metal products and also have metal cleaning operations and in-house refineries that allow for the reclaim of precious metals from internally generated or customer scrap. We refine that scrap through our internal operations and externally through outside vendors.

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When taking periodic physical inventories, we reconcile the actual precious metals to what was estimated prior to the physical inventory. Those estimates are based on assays or samples of precious metals taken during the refining process. If those estimates are inaccurate, we may have an inventory long (more physical precious metal than what we had estimated) or short (less physical precious metal than what we had estimated). These fluctuations could have a material impact on our financial statements and may impact earnings. For example, we reported a net inventory valuation loss of \$3.6 million in the fourth quarter 2011 as a result of the reconciliation of the amount of metal on hand with amounts financed. Higher precious metal prices may magnify the value of any inventory long or short.

Our holding company structure causes us to rely on funds from our subsidiaries.

We are a holding company and conduct substantially all our operations through our subsidiaries. As a holding company, we are dependent upon dividends or other intercompany transfers of funds from our subsidiaries. The payment of dividends and other payments to us by our subsidiaries may be restricted by, among other things, applicable corporate and other laws and regulations, agreements of the subsidiaries and the terms of our current and future indebtedness.

Our financial results are likely to be negatively impacted by an impairment of goodwill should our shareholder equity exceed our market capitalization for a number of quarters.

A goodwill impairment charge may be triggered by a reduction in actual and projected cash flows, which could be negatively impacted by the market price of our common shares. Our goodwill balance at December 31, 2011 was \$84.0 million. Any required non-cash impairment charge could significantly reduce this balance and have a material impact on our reported financial position and results of operations.

Changes in laws or regulations or the manner of their interpretation or enforcement could adversely impact our financial performance and restrict our ability to operate our business or execute our strategies.

New laws or regulations, or changes in existing laws or regulations or the manner of their interpretation or enforcement, could increase our cost of doing business and restrict our ability to operate our business or execute our strategies. This includes, among other things, the possible taxation under U.S. law of certain income from foreign operations, compliance costs and enforcement under the Dodd-Frank Wall Street Reform and Consumer Protection Act, and costs associated with complying with the Patient Protection and Affordable Care Act of 2010 and the regulations promulgated thereunder.

We are exposed to lawsuits in the normal course of business, which could harm our business.

During the ordinary conduct of our business, we may become involved in certain legal proceedings, including those involving product liability claims, third-party lawsuits relating to exposure to beryllium and claims against us of infringement of intellectual property rights of third parties. Due to the uncertainties of litigation, we can give no assurance that we will prevail at the conclusion of future claims. Certain of these matters involve types of claims that, if they result in an adverse ruling to us, could give rise to substantial liability which could have a material adverse effect on our business, operating results or financial condition.

We are presently uninsured for beryllium-related claims where the claimants' first exposure to beryllium occurred on or after January 1, 2008, and we have not undertaken to estimate the impact of such claims, which have yet to be asserted. In addition, some jurisdictions preclude insurance coverage for punitive damage awards. Accordingly, our profitability could be adversely affected if any current or future claimants obtain judgments for any uninsured compensatory or punitive damages. Further, an unfavorable outcome or settlement of a pending beryllium case or adverse media coverage could encourage the commencement of additional similar litigation.

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Health issues, litigation and government regulations relating to our beryllium operations could significantly reduce demand for our products, limit our ability to operate and adversely affect our profitability.

If exposed to respirable beryllium fumes, dusts or powder, some individuals may demonstrate an allergic reaction to beryllium and may later develop a chronic lung disease known as chronic beryllium disease, or CBD. Some people who are diagnosed with CBD do not develop clinical symptoms at all. In others, the disease can lead to scarring and damage of lung tissue, causing clinical symptoms that include shortness of breath, wheezing and coughing. Severe cases of CBD can cause disability or death.

Further, some scientists claim there is evidence of an association between beryllium exposure and lung cancer, and certain standard-setting organizations have classified beryllium and beryllium compounds as human carcinogens.

The health risks relating to exposure to beryllium have been, and will continue to be, a significant issue confronting the beryllium-containing products industry. The health risks associated with beryllium have resulted in product liability claims, employee and third-party lawsuits and increased levels of scrutiny by federal, state, foreign and international regulatory authorities. This scrutiny includes regulatory decisions relating to the approval or prohibition of the use of beryllium-containing materials for various uses. Concerns over CBD and other potential adverse health effects relating to beryllium, as well as concerns regarding potential liability from the use of beryllium, may discourage our customers' use of our beryllium-containing products and significantly reduce demand for our products. In addition, adverse media coverage relating to our beryllium-containing products could damage our reputation or cause a decrease in demand for beryllium-containing products, which could adversely affect our profitability.

Our bertrandite ore mining and beryllium-related manufacturing operations and some of our customers' businesses are subject to extensive health and safety regulations that impose, and will continue to impose, significant costs and liabilities, and future regulation could increase those costs and liabilities or effectively prohibit production or use of beryllium-containing products.

Our customers and we are subject to laws regulating worker exposure to beryllium. Standards for exposure to beryllium are under review by OSHA, the Department of Energy and by other governmental and private standard-setting organizations. One result of these reviews will likely be more stringent worker safety standards. Some organizations, such as the California Occupational Health and Safety Administration and the American Conference of Governmental Industrial Hygienists, have adopted standards that are more stringent than the current standards of OSHA. The development, proposal or adoption of more stringent standards may affect buying decisions by the users of beryllium-containing products. If the standards are made more stringent and/or our customers or other downstream users decide to reduce their use of beryllium-containing products, our results of operations, liquidity and financial condition could be materially adversely affected. The impact of this potential adverse effect would depend on the nature and extent of the changes to the standards, the cost and ability to meet the new standards, the extent of any reduction in customer use and other factors. The magnitude of this potential adverse effect cannot be estimated.

Our bertrandite ore mining and manufacturing operations are subject to extensive environmental regulations that impose, and will continue to impose, significant costs and liabilities on us, and future regulation could increase these costs and liabilities or prevent production of beryllium-containing products.

We are subject to a variety of governmental regulations relating to the environment, including those relating to our handling of hazardous materials and air and wastewater emissions. Some environmental laws impose substantial penalties for non-compliance. Others, such as the federal Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA, impose strict, retroactive and joint and several liability upon entities responsible for releases of hazardous substances. Bertrandite ore mining is also subject to extensive governmental regulation on matters such as permitting and licensing requirements, plant and wildlife protection, reclamation and restoration of mining properties, the discharge of materials into the environment and the effects that mining has on groundwater quality and availability. Future requirements could impose on us significant

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additional costs or obligations with respect to our extraction, milling and processing of ore. If we fail to comply with present and future environmental laws and regulations, we could be subject to liabilities or our operations could be interrupted. In addition, future environmental laws and regulations could restrict our ability to expand our facilities or extract our bertrandite ore deposits. These environmental laws and regulations could also require us to acquire costly equipment, obtain additional financial assurance, or incur other significant expenses in connection with our business, which would increase our costs of production.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

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We operate manufacturing plants, service and other facilities throughout the world. During 2011, we made effective use of our productive capacities at our principal facilities. We believe that the quality and production capacity of our facilities is sufficient to maintain our competitive position for the foreseeable future. Information as of December 31, 2011, with respect to our significant facilities that are owned or leased, and the respective segments in which they are included, is set forth below:

Location	Owned or Leased	Approximate Number of Square Feet
Corporate and Administrative Offices		
Mayfield Heights, Ohio (2)(3)(5)	Leased	53,800
Manufacturing Facilities		
Albuquerque, New Mexico (1)	Owned/Leased	13,000/80,200
Bloomfield, Connecticut (1)	Leased	23,400
Brewster, New York (1)	Leased	75,000
Buellton, California (1)	Leased	35,000
Buffalo, New York (1)	Owned	97,000
Delta, Utah (2)	Owned	86,000
Elmore, Ohio (2)(3)	Owned/Leased	681,000/191,000
Fremont, California (3)	Leased	16,800
Limerick, Ireland (1)	Leased	18,000
Lincoln, Rhode Island (4)	Owned/Leased	130,000/11,000
Lorain, Ohio (2)	Owned	55,000
Louny, Czech Republic (1)	Leased	19,800
Milwaukee, Wisconsin (1)	Owned/Leased	99,000/7,300
Newburyport, Massachusetts (1)	Owned	30,000
Reading, Pennsylvania (2)	Owned	123,000
Santa Clara, California (1)	Leased	5,800
Shanghai, China (1)	Leased	101,400
Singapore (1)	Leased	30,000
Subic Bay, Philippines (1)	Leased	5,000
Suzhou, China (1)	Leased	22,400
Taipei, Taiwan (1)	Leased	11,500
Tucson, Arizona (3)	Owned	53,000
Tyngsboro, Massachusetts (1)	Leased	38,000
Westford, Massachusetts (1)	Leased	75,000
Wheatfield, New York (1)	Owned	35,000
Windsor, Connecticut (1)	Leased	34,700
Service and Distribution Centers		
Elmhurst, Illinois (2)	Leased	28,500
Fukaya, Japan (2)(3)(4)	Owned	35,500
Reading, England (1)(2)(3)(4)	Leased	9,700
Singapore (2)(3)(4)	Leased	2,500
Stuttgart, Germany (2)(4)	Leased	24,800
Tokyo, Japan (1)(2)(3)(4)	Leased	7,200
Warren, Michigan (2)	Leased	34,500

- (1) Advanced Material Technologies
- (2) Performance Alloys
- (3) Beryllium and Composites
- (4) Technical Materials
- (5) All Other

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In addition to the above, the Company holds certain mineral rights on 7,500 acres in Juab County, Utah from which the beryllium-bearing ore, bertrandite, is mined by the open pit method. A portion of these mineral rights are held under lease. Ore reserve data can be found in Item 7 of this Form 10-K.

Item 3. LEGAL PROCEEDINGS

Our subsidiaries and our holding company are subject, from time to time, to a variety of civil and administrative proceedings arising out of our normal operations, including, without limitation, product liability claims, health, safety and environmental claims and employment-related actions. Among such proceedings are the cases described below.

Beryllium Claims

As of December 31, 2011, our subsidiary, Materion Brush Inc., was not a defendant in any proceedings brought by plaintiffs alleging that they had contracted, or had been placed at risk of contracting, beryllium sensitization or chronic beryllium disease or other lung conditions as a result of exposure to beryllium. Plaintiffs in beryllium cases sought recovery under negligence and various other legal theories and sought compensatory and punitive damages, in many cases of an unspecified sum. Spouses of some plaintiffs claimed loss of consortium.

As of December 31, 2010, there were two beryllium cases (involving six plaintiffs) and as of December 31, 2011, there were no pending beryllium cases. During 2011:

one case (involving one plaintiff) was voluntarily dismissed by the plaintiff; and

one case (involving five plaintiffs) was settled by three plaintiffs, and two spouses dismissed their consortium claims. The Company has some insurance coverage, subject to an annual deductible.

Item 4. MINE SAFETY DISCLOSURES

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 (17 CFR 229.104) is included in Exhibit 95 to this Form 10-K.

Table of Contents**PART II****Item 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****Market Information and Dividends**

The Company's common shares are listed on the New York Stock Exchange under the symbol MTRN. As of February 14, 2012, there were 1,315 shareholders of record. The table below is a summary of the range of market prices with respect to common shares during each quarter of fiscal years 2011 and 2010. We did not pay any dividends in 2011 or 2010. We have no current intention to declare dividends on our common shares in the near term. Our current policy is to retain all funds and earnings for use in the operation and expansion of our business.

Fiscal Quarters	Stock Price Range	
	High	Low
2011		
First	\$ 44.94	\$ 33.99
Second	44.00	33.02
Third	42.05	21.11
Fourth	30.15	19.53
2010		
First	\$ 22.95	\$ 15.80
Second	30.33	18.75
Third	29.23	18.24
Fourth	40.11	27.62

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The following graph sets forth the cumulative shareholder return on our common shares as compared to the cumulative total return of the S&P SmallCap 600 Index and the Russell 2000 Index as Materion Corporation is a component of these indices.

	2006	2007	2008	2009	2010	2011
Materion Corporation	\$ 100	\$ 110	\$ 38	\$ 55	\$ 114	\$ 72
S&P SmallCap 600	\$ 100	\$ 100	\$ 69	\$ 86	\$ 109	\$ 110
Russell 2000	\$ 100	\$ 98	\$ 65	\$ 83	\$ 105	\$ 105

The above graph assumes that the value of our common shares and each index was \$100 on December 31, 2006 and that all dividends, if paid, were reinvested.

Table of Contents**Item 6. SELECTED FINANCIAL DATA****Materion Corporation and Subsidiaries**

(Thousands except per share amounts)	2011	2010	2009	2008	2007
For the year					
Net sales	\$ 1,526,730	\$ 1,302,314	\$ 715,186	\$ 909,711	\$ 955,709
Cost of sales	1,311,409	1,079,666	623,764	757,836	759,037
Gross margin	215,321	222,648	91,422	151,875	196,672
Operating profit (loss)	57,078	73,633	(19,485)	28,071	84,465
Interest expense - net	2,812	2,665	1,299	1,995	1,760
Income (loss) before income taxes	54,266	70,968	(20,784)	26,076	82,705
Income taxes (benefit)	14,287	24,541	(8,429)	7,719	29,420
Net income (loss)	39,979	46,427	(12,355)	18,357	53,285
Earnings per share of common stock:					
Basic	1.96	2.29	(0.61)	0.90	2.62
Diluted	1.93	2.25	(0.61)	0.89	2.59
Depreciation and amortization	44,194	35,932	32,369	34,204	24,296
Capital expenditures	28,187	42,314	44,173	35,515	26,429
Mine development expenditures	560	11,348	808	421	7,121
Year-end position					
Working capital	231,230	208,365	140,482	189,899	216,253
Ratio of current assets to current liabilities	2.7 to 1	2.4 to 1	2.0 to 1	2.8 to 1	2.9 to 1
Property and equipment:					
At cost	\$ 753,326	\$ 719,953	\$ 665,361	\$ 635,266	\$ 583,961
Cost less depreciation and impairment	263,813	265,868	227,766	207,254	186,175
Total assets	772,103	735,410	621,953	581,897	550,551
Long-term liabilities	184,143	157,571	131,630	116,524	69,140
Long-term debt	40,463	38,305	8,305	10,605	10,005
Shareholders equity	405,982	384,356	339,859	347,097	353,714
Weighted-average number of shares of stock outstanding:					
Basic	20,365	20,282	20,191	20,335	20,320
Diluted	20,754	20,590	20,191	20,543	20,612

Capital expenditures shown above include amounts spent under government contracts for which reimbursements were received from the government in the amounts of \$5.4 million in 2011, \$21.9 million in 2010, \$28.2 million in 2009, \$8.0 million in 2008 and \$3.5 million in 2007.

See Notes to Consolidated Financial Statements.

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Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS OVERVIEW

We are an integrated producer of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications. Our products are sold into numerous markets, including consumer electronics, industrial components and commercial aerospace, defense and science, energy, medical, automotive electronics, telecommunications infrastructure and appliance.

Sales were \$1.5 billion in 2011, a 17% increase over 2010 and a record high. The sales growth was mainly due to higher metal pass-through prices, improved pricing in portions of our business and stronger demand from certain markets, including industrial components and commercial aerospace, energy, automotive electronics and medical. However, demand from the consumer electronics market, which was strong in the first half of 2011, weakened in the second half of the year while defense sales were relatively flat and our overall sales and order entry rate slowed down in the fourth quarter of the year.

Gross margin of \$215.3 million in 2011 was \$7.3 million lower than in 2010 as the benefits from the higher sales volume were more than offset by the ongoing costs associated with the start-up of our new beryllium facility, inventory valuation differences and other manufacturing issues.

We generated an operating profit of \$57.1 million in 2011 compared to an operating profit of \$73.6 million in 2010. In addition to the lower gross margin, operating profit in 2011 was adversely affected by higher expenses, including an increase in consignment fees largely due to higher metal market prices and an increase in research and development expenses caused by higher activity levels.

Legal, administrative and marketing expenses also increased in 2011 due to the successful completion of the rebranding of our company under the Materion name. This program was designed to improve the coordination and effectiveness of our marketing efforts and improve our profitability over the long term.

We incurred additional expenses in 2011 as a result of our acquisition of all of the outstanding stock of EIS Optics Limited (EIS) for \$23.9 million in cash in the fourth quarter 2011. EIS produces optical filters and related materials at its manufacturing operations in China. The acquisition expanded the market breadth of our precision optics product line and was consistent with our overall strategy to acquire niche operations for our advanced material business. As part of that strategy, we had previously acquired Barr Associates, Inc. (Barr) in the fourth quarter 2009 followed closely by our acquisition of Academy Corporation (Academy) in the first quarter 2010.

Our effective tax rate was lower in 2011 than in 2010 due to differences in a number of credits and adjustments, which offset a portion of the impact of the decreased operating profit on net income. Diluted earnings per share were \$1.93 in 2011 and \$2.25 in 2010.

Cash flow from operations was a strong \$56.8 million in 2011, an improvement from the cash flow from operations of \$31.0 million generated in 2010. This cash flow was sufficient to fund capital expenditures, the acquisition of EIS and a net reduction in debt during the year. The debt-to-debt-plus-equity ratio was 17% at year-end 2011 compared to 18% at year-end 2010. Various debt and metal consignment agreements were renegotiated during 2011 resulting in expanded capacity and more flexible terms.

With the favorable resolution of two chronic beryllium disease lawsuits in the first quarter 2011, there were no beryllium disease claims pending against us as of year-end 2011.

Table of Contents**RESULTS OF OPERATIONS**

(Millions except per share amounts)	2011	2010	2009
Net sales	\$ 1,526.7	\$ 1,302.3	\$ 715.2
Operating profit (loss)	57.1	73.6	(19.5)
Income (loss) before income taxes	54.3	71.0	(20.8)
Net income (loss)	40.0	46.4	(12.4)
Diluted earnings per share	1.93	2.25	(0.61)

Sales of \$1.5 billion were \$224.4 million, or 17%, higher than sales of \$1.3 billion in 2010. Order entry rates started 2011 off fairly strong but weakened in the second half of the year and in the fourth quarter in particular. The order entry rate was 15% lower in the second half of 2011 than in the first half of the year. The total order entry level in 2011, while higher than the order entry in 2010, was approximately 3% lower than sales in 2011. Sales in 2010 were \$587.1 million, or 82%, higher than sales of \$715.2 million in 2009. Demand from the majority of our key markets improved in 2010 over 2009 and overall demand remained strong throughout 2010 as order entry levels exceeded sales in each quarter of 2010.

Consumer electronics is our largest market and accounted for 38% of our total sales in 2011. While sales to this market grew approximately 10% in 2011 over 2010, this growth was mainly due to higher metal pass-through prices. Excluding the metal price difference, consumer electronics sales declined as sales softened in the second half of 2011 due to downstream inventory reductions and other factors. Consumer electronics sales increased significantly in 2010 over 2009 as a result of an increase in consumer spending due to the improved economic conditions as well as the development of new applications that utilize our materials, including smart phones and LEDs.

Defense and science market sales, which were 11% of our total sales in 2011, were relatively unchanged in 2011 as compared to 2010. Our traditional beryllium-based defense business softened in the second half of the year due to government spending delays and push-outs. Demand for precision optics for defense and science applications also slowed down in 2011. This softness was offset by mild growth in defense applications from other portions of the business. Defense and science sales grew in 2010 over 2009 as a result of improved demand for beryllium-based applications as well as inclusion of a full year of Barr's sales.

Sales to the *industrial components and commercial aerospace market* were 11% of our total sales in 2011 and contributed to the growth in sales in each of the last two years. Sales of x-ray windows for industrial applications have grown over the last two years. Commercial aerospace sales also have improved as have sales of materials for heavy equipment and other industrial applications.

Energy market sales, which accounted for approximately 8% of our total sales in 2011, grew at a double-digit rate in 2011 over 2010 largely due to strengthening demand for our traditional oil and gas materials. Materials for solar energy, fuel cells and other alternative energy applications contributed to the growth in 2011 as did architectural glass applications.

Automotive electronics sales also grew at a double-digit rate in 2011 over 2010 after nearly doubling in 2010 over 2009. Demand in the domestic and European markets has remained solid over the past two years. Automotive electronics sales were approximately 5% of total sales in both 2011 and 2010.

Sales to the *medical market* improved in 2011 over 2010 after being relatively unchanged in 2010 from 2009. In 2010, we temporarily lost sales to a key medical application customer as a result of lower manufacturing yields. Process improvements were implemented and shipments to the customer resumed in 2011. Market and product development efforts also led to improved sales to other customers in the medical market in 2011. Medical market sales were 5% of our total sales in 2011.

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The acquisition of EIS in the fourth quarter 2011 had a minor impact on our sales in 2011, while the acquisitions of Barr and Academy accounted for 40% of the sales growth in 2010 over 2009. A large portion of Academy's sales is a precious metal pass-through.

Sales are affected by metal prices as changes in precious metal and a portion of the changes in base metal prices, primarily copper, are passed on to our customers. Metal prices have been quite volatile over the last three years, with various metals reaching near-term or all-time record highs during this time period. The average copper prices for 2011 and 2010 were higher than the respective prior year. Gold and other precious metal prices were also higher on average in 2011 and 2010 than the immediate prior year, although prices softened in the fourth quarter 2011. The net change in metal prices resulted in an estimated \$195.6 million increase in sales in 2011 over 2010 and an estimated \$103.0 million increase in sales in 2010 over 2009.

Domestic sales were 23% higher in 2011 over 2010 while domestic sales in 2010 were slightly more than double the 2009 level. Domestic sales include the majority of the impact of the higher metal price pass-through between periods. The growth in 2010 over 2009 was also due to the addition of Barr and Academy. International sales, which are included in each of our reportable segments, increased 4% in 2011 from 2010 after improving 48% in 2010 over 2009.

Gross margin was \$215.3 million and 14% of sales in 2011 compared to \$222.6 million and 17% of sales in 2010. In 2009, gross margin was \$91.4 million and 13% of sales.

Differences in the volumes sold by the four segments between 2011 and 2010 resulted in a net increase of \$9.2 million in gross margin in 2011. The change in product mix, however, was unfavorable partially due to the lower sales of higher margin-generating traditional beryllium products for defense applications and strip products to the consumer electronics market in 2011 compared to 2010. Improved pricing in portions of our business provided a margin benefit in 2011.

We continued working on the installation and start-up of our new beryllium facility during 2011 at the Elmore, Ohio plant site. We incurred additional operating and material costs and generated manufacturing inefficiencies as a result of the delayed start-up of the facility totaling an estimated \$5.3 million in 2011.

The gross margin in 2011 was also reduced as a result of net unfavorable inventory valuation adjustments recorded in the fourth quarter 2011 within the Advanced Material Technologies segment of \$3.6 million.

Higher scrap rates on certain nickel-based products reduced margins by approximately \$3.1 million in 2011 as compared to 2010. Progress was made on improving yields and reducing scrap on these products during the fourth quarter 2011.

We recorded a \$4.4 million benefit to gross margin in 2010 as a result of the depletion of a last-in, first-out (LIFO) inventory layer. There was no corresponding benefit recorded in 2011 or 2009.

We estimate that the incremental margin generated by the higher sales volumes, including the sales from Barr and Academy, accounted for approximately 76% of the gross margin improvement in 2010 over 2009. Manufacturing efficiencies, in part due to the increased production levels, and cost control efforts also contributed to the margin growth in 2010. Factory labor, other direct manufacturing costs and manufacturing overhead costs did not increase proportionately with the increase in sales in 2010. The overall change in product mix was favorable between 2010 and 2009, while pricing improvements were made in portions of our business. Yield losses and other inventory valuation adjustments at certain operations had a minor negative impact on overall margins in 2010.

We implemented various cost-saving initiatives beginning in the fourth quarter 2008 and during 2009 in response to the weakening order entry rate at that time. These initiatives included a reduction in work force,

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reduced wage and compensation levels, elimination of overtime (and a reduction in regular work hours in some cases), reduced discretionary spending and the cancellation or deferral of various projects and initiatives. These efforts helped to offset the negative margin and profit impact of the lower sales volume in 2009.

With the improved sales volumes subsequent to 2009, wage levels were restored and various resources, including manpower and services, were added back as needed to support the current and projected volumes. However, the total employment level, excluding the impact of the acquisitions, at year-end 2011 and 2010 was still lower than the third quarter 2008 employment level (which was just prior to when the global economic crisis began to significantly impact our business).

The annual expense on the domestic defined benefit pension plan was \$8.0 million in 2011, \$5.8 million in 2010 and \$3.2 million in 2009 (which included a one-time curtailment gain due to the reduction in the workforce in that year). The increase in the pension expense in 2011 over 2010 was due to a change in the discount rate, the performance of the plan assets and other factors and affected cost of sales, selling, general and administrative expenses and, to a lesser extent, research and development expenses. See *Critical Accounting Policies* .

Selling, general and administrative (SG&A) expenses totaled \$131.4 million (9% of sales) in 2011, \$126.5 million (10% of sales) in 2010 and \$89.8 million (13% of sales) in 2009.

Legal, administrative and marketing expenses associated with the change of our name to Materion Corporation in the first quarter 2011 totaled \$3.9 million in 2011. Costs associated with this program totaled \$0.9 million in 2010.

The incentive compensation expense on plans that pay in cash was \$7.0 million lower in 2011 than 2010 and \$15.2 million higher in 2010 than in 2009. The changes in the annual expense between years were caused primarily by the performance of the individual operations relative to their plans objectives. Stock-based compensation expense, including the expense for stock appreciation rights, restricted stock and performance restricted shares, was \$5.0 million in 2011, \$4.1 million in 2010 and \$3.5 million in 2009. The comparison of stock-based compensation expense between years may be affected by changes in plan design, the number of grants in a given year, actual performance relative to the plans objectives, movement in our stock price, forfeitures, vesting schedules and other factors.

Acquisition-related expenses for legal, accounting and due diligence services associated with the EIS, Academy and Barr transactions totaled \$1.8 million in 2011, \$0.1 million in 2010 and \$0.7 million in 2009. As a result of a change in accounting regulations effective January 1, 2009, acquisition-related expenses must be charged against income as incurred. Previously, these expenses would have been capitalized as part of the cost of the acquisitions.

Expenses incurred by EIS subsequent to its acquisition totaled \$1.4 million and contributed to the increase in SG&A expenses in 2011. Approximately 35% of the increase in SG&A expenses in 2010 over 2009 was due to the expenses incurred by Barr and Academy subsequent to their acquisition.

Severance and related costs associated with headcount reductions totaled approximately \$0.3 million in 2011, \$1.1 million in 2010 and \$2.1 million in 2009.

Commissions and various other sales-related expenses were higher in 2011 than in 2010. With the significantly improved sales volumes in 2010 over 2009, a portion of the previously reduced selling and administrative resources were added back during 2010 to support the current and projected growth in the business.

Corporate information technology expenses were \$0.7 million higher in 2011 than in 2010 due to an increase in the number of projects and to support the growth in the organization. Corporate environmental, health

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and safety expenses increased \$0.7 million in 2011 over 2010 due to various studies undertaken. Other corporate administrative expenses, including legal compliance costs and the costs of initiatives designed to improve efficiencies and profitability over the long term, were higher in 2011 than in 2010. Other corporate expenses were also higher in 2010 than in 2009.

Research and development (R&D) expenses were \$11.1 million in 2011, \$7.1 million in 2010 and \$6.8 million in 2009. While R&D expenses increased \$4.0 million in 2011, the expense was less than 1% of sales in each of the last three years. The higher expense in 2011 was due to an increase in activity levels and various special projects. R&D efforts are focused on developing new products and applications as well as continuing improvements in our existing products.

Derivative ineffectiveness expense was \$0.6 million in 2010 and \$4.9 million in 2009. There was no derivative ineffectiveness recorded in 2011. We secured a copper derivative embedded in a debt obligation in 2009 that served as an economic hedge to changes in the value of our copper inventories. However, the derivative did not qualify as a hedge for accounting purposes and changes in its fair value were recorded against income as ineffectiveness expense. The derivative was in a loss position of \$4.9 million as of year-end 2009 as a result of an increase in the market price of copper since the derivative's inception. Forward contracts were secured in 2010 to hedge against further unfavorable changes in the embedded derivative's fair value. The \$0.6 million of expense in 2010 was the net unfavorable change in the fair value of these instruments in 2010. The embedded derivative and forward contracts matured during 2010.

Other-net expense was \$15.8 million in 2011, \$14.8 million in 2010 and \$9.5 million in 2009. See Note N to the Consolidated Financial Statements for the details of the major components of other-net expense for each of the three years. The major differences in other-net expense between the years include the following:

The metal consignment fee increased \$3.3 million in 2011 over 2010 and \$3.2 million in 2010 over 2009 as a result of higher metal prices, increased quantities of metal on hand and the inclusion of Academy's requirements under the consignment lines beginning in 2010.

The Barr purchase agreement included an earn out feature that would require us to make additional payments to the prior owners of Barr based upon Barr's performance against identified benchmarks over the 2010 to 2013 period. The present value of the earn out was estimated to be \$1.9 million at the time of the acquisition and was recorded in other long-term liabilities on the Consolidated Balance Sheet as of December 31, 2009. No payments were required to be made in either 2011 or 2010 based upon Barr's actual performance relative to the individual benchmarks for those two years. We determined that the fair value of this liability, based upon the current facts and circumstances and updated projections, should be reduced to zero as of December 31, 2011. We had previously reduced the fair value of the liability to \$1.1 million as of December 31, 2010 based upon a review of the facts and circumstances at that time. The \$1.1 million benefit from the reduction to the liability in the fourth quarter 2011 and the \$0.8 million benefit from the liability reduction taken in the fourth quarter 2010 were recorded as income in those respective periods in accordance with accounting guidelines.

Other-net in 2011 includes a \$1.3 million benefit from the favorable resolution of a lawsuit that we had filed against a utility provider for raising our billing rates in violation of our contract. In the fourth quarter 2011, the court ruled in our favor and we received \$1.3 million in full satisfaction of our claim.

Foreign currency exchange and translation losses totaled \$2.8 million in 2011, \$0.8 million in 2010 and \$0.7 million in 2009. These losses result from movements in the value of the U.S. dollar versus other currencies, primarily the euro and yen, and the related impact on certain foreign currency denominated assets, liabilities and transactions and the maturity of foreign currency hedge contracts.

We donated our former headquarters building and the associated land to a non-profit organization, which resulted in a write-off of the carrying value of \$0.5 million to other-net expense in 2010. The majority of this unfavorable impact on income before income taxes was offset by a favorable income tax adjustment in that year.

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Operating profit was \$57.1 million in 2011, a decline of \$16.5 million from the operating profit of \$73.6 million generated in 2010. The decline resulted from the margin benefit from changes in the sales volume being more than offset by the additional plant start-up costs, other margin issues, higher SG&A expenses, an increase in metal consignment fees and other factors.

Operating profit in 2010 was a \$93.1 million improvement over the \$19.5 million operating loss in 2009. This improvement was due to the higher margin generated by the increased sales volumes, the favorable impact of the acquisitions and other factors offset in part by an increase in incentive compensation, metal consignment fees, amortization and other expenses.

Interest expense net was \$2.8 million in 2011, \$2.7 million in 2010 and \$1.3 million in 2009. The average outstanding debt levels were similar in 2011 and 2010, while the average effective borrowing rate was slightly higher in 2011 than in 2010, particularly in the second half of 2011. The difference in interest capitalized in association with capital projects between periods was negligible.

The average outstanding debt levels were higher throughout 2010 than 2009 primarily as a result of the Barr and Academy acquisitions and the increase in working capital. Capital lease balances were higher in 2010 than 2009 as well. The impact of the higher debt and capital lease levels on interest expense was partially offset by a lower effective borrowing rate in 2010 than 2009.

Income (loss) before income taxes and income tax expense (benefit) for each of the past three years were as follows:

(Dollars in millions)	2011	2010	2009
Income (loss) before income taxes	\$ 54.3	\$ 71.0	\$ (20.8)
Income tax expense (benefit)	14.3	24.5	(8.4)
Effective tax (benefit) rate	26.3%	34.6%	(40.6)%

The effects of percentage depletion (a tax benefit resulting from our mining operations), foreign source income and deductions, the production deduction, discrete events and other items were major causes of the differences between the effective and statutory rates in each of the three years. The effect of executive compensation was also a cause for the difference between the effective and statutory rates in 2011 and 2010, while the research and experimentation credit provided a benefit in 2011.

The tax expense in 2011 included net favorable discrete items of \$2.0 million due to a combination of a reduction to the tax reserves as a result of the lapse of the statute of limitations, adjustments to the 2010 tax returns that were finalized in the third quarter 2011 and other items.

The tax expense in 2010 included \$1.5 million for the reduction of a deferred tax asset as a result of the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act. Beginning in 2013, we will no longer be able to claim an income tax deduction for prescription drug benefits provided to our retirees and reimbursed under the Medicare Part D retiree drug subsidy program. While this tax increase does not take effect until 2013, accounting standards require that the carrying value of a deferred tax asset be adjusted in the period in which legislation changing the applicable tax law is enacted.

The 2010 tax expense also included the unfavorable impact of a net \$0.6 million increase in the tax reserves that was recorded in accordance with accounting guidelines. In 2009, the tax benefit was increased by a net \$0.7 million reduction in the tax reserves.

See Note P to the Consolidated Financial Statements for a reconciliation of the statutory and effective tax rates.

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Net income was \$40.0 million, or \$1.93 per share diluted, in 2011 versus \$46.4 million, or \$2.25 per share diluted, in 2010. In 2009, the net loss was \$12.4 million, or \$0.61 per share diluted.

Segment Disclosures

In the first quarter 2011, we changed the name of our company from Brush Engineered Materials Inc. to Materion Corporation. The names of all of our active subsidiaries changed as well and each subsidiary now has Materion as part of its name. The legal and ownership structure of our subsidiaries remained unchanged.

This name change did not alter our senior management structure or how the chief operating decision maker evaluates the performance of our businesses. We continue to have the same four reportable segments as we had previously with no change in their make up, although the names of those segments have changed. Advanced Material Technologies and Services has been revised to Advanced Material Technologies, Specialty Engineered Alloys is now known as Performance Alloys, Beryllium and Beryllium Composites has been shortened to Beryllium and Composites, and Engineered Material Systems has been changed to Technical Materials.

Results by segment are shown in Note M to the Consolidated Financial Statements. The All Other column in Note M includes our parent company expenses, other corporate charges and the operating results of Materion Services Inc., a wholly owned subsidiary that provides administrative and financial oversight services to our other businesses on a cost-plus basis.

The All Other column shows an operating loss of \$10.1 million in 2011, \$8.3 million in 2010 and \$9.4 million in 2009. The primary difference between the 2011 and 2010 results was due to the costs associated with the company name change, due diligence and acquisition costs, various corporate initiatives and other factors offset in part by lower incentive compensation and an increase in costs charged out to the business units.

The loss in All Other was lower in 2010 than in 2009 as an increase in corporate spending and higher incentive compensation expense were more than offset by an increase in charges out to the business units and the difference in derivative ineffectiveness between periods.

Advanced Material Technologies

(Millions)	2011	2010	2009
Net sales	\$ 1,051.8	\$ 879.0	\$ 460.8
Operating profit	33.5	39.5	22.6

Advanced Material Technologies manufactures precious, non-precious and specialty metal products, including vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high temperature braze materials, ultra-fine wire, advanced chemicals, optics, performance coatings and microelectronic packages. These products are used in wireless, semiconductor, photonic, hybrid and other microelectronic applications within the consumer electronics and telecommunications infrastructure markets. Other key markets for these products include medical, defense and science, energy and industrial components. Advanced Material Technologies also has metal cleaning operations and in-house refineries that allow for the reclaim of precious metals from internally generated or customers' scrap. This segment has domestic facilities in New York, Connecticut, Wisconsin, New Mexico, Massachusetts and California and international facilities in Asia and Europe.

Sales from Advanced Material Technologies were \$1.1 billion in 2011, an improvement of \$172.8 million, or 20%, over sales of \$879.0 million in 2010. Sales in 2010 were \$418.2 million, or 91%, higher than sales of \$460.8 million in 2009. The sales growth in both years was due to a combination of higher precious metal prices, improved demand from certain markets and product and market development efforts. The acquisitions of Barr and Academy accounted for approximately 56% of the sales growth in 2010 over 2009 while the EIS acquisition had a minor impact on the 2011 sales growth.

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We adjust our selling prices daily to reflect the current cost of the precious and various non-precious metals sold. While a change in the cost of the metal is generally a pass-through to the customer, we generate a margin on our fabrication efforts irrespective of the type of metal used in a given application. On average, the applicable metal prices were higher in 2011 and 2010 than the respective prior years. We estimate that the higher metal price pass-through increased sales by \$180.5 million in 2011 over 2010. While the metal price impact was greater than the total sales increase, underlying volumes processed grew in 2011 due to differences in product mix, customer supplied metal and other factors. Higher metal prices accounted for an estimated \$90.9 million of the increase in sales in 2010 over 2009.

Sales of vapor deposition targets, lids, wire and other related precious and non-precious metal products for microelectronic applications grew significantly during 2011 over 2010, but the majority of this growth was due to the pass-through of higher metal prices. Sales of these materials to the consumer electronics market for LED, wireless and other handheld device applications, while higher in 2011 than in 2010, slowed down in the second half of 2011 as demand was stagnant. Strong demand for these applications was a key driver in the growth of Advanced Material Technologies sales in 2010 over 2009.

Refining revenue grew in 2011 and 2010 over the immediate prior year in part due to the expansion of our operations, the acquisition of Academy and increased marketing efforts. Refining revenue is also partially a function of the volume of precious metal products sold and the available quantity of metal in the market to be reclaimed.

Sales of advanced chemicals for LED, optics, security, photovoltaic and other applications from the Wisconsin operations grew approximately 5% in 2011 over 2010 after growing 34% in 2010 over 2009. The majority of this growth was due to the expanded use of LED technologies and the development of new applications. However, the growth rate slowed down in the second half of 2011 due to downstream inventory corrections and other factors. Advanced chemical sales for architectural glass applications within the energy market, which are produced through Academy's New Mexico operations, grew at a double-digit rate in 2011 over 2010.

Sales of large area coatings, primarily precision precious metal coated polymer films, improved approximately 50% in 2011 over 2010 after adjusting for the estimated metal price difference. Sales of these products declined approximately 17% in 2010 from 2009. These products are sold primarily into the medical market. Lower manufacturing yields and the inability to hold tolerances resulted in missed sales to a key customer and the loss of a portion of the business to our competitor in 2010. New processes were developed and qualified with the customer and shipment levels improved during 2011. The sales growth in 2011 was also due to product development and share gains with other customers. Large area coatings continued its development work on solar energy and other potential new applications during 2011.

Precision optics sales were slightly higher in 2011 than in 2010 mainly as a result of the acquisition of EIS in the fourth quarter 2011. Optics sales from Barr for the defense and science market declined in 2011 from 2010 due to changes in government spending patterns and budget cutbacks. Sales of precision optics to the medical and other markets improved slightly in 2011 over 2010. Precision optics sales in 2010 were higher than 2009 due to the inclusion of a full year of Barr's results.

Sales of electronic packages, one of this segment's smaller product lines, declined approximately 20% in 2011 from 2010 mainly due to changes in technology (which were anticipated coming into 2011) within the telecommunications infrastructure market. Sales of electronic packages had grown 42% in 2010 over 2009.

Sales for data storage applications, primarily magnetic head materials, had increased in 2010 over 2009 but softened in 2011 back to a similar level as 2009.

Order entry for the Advanced Material Technologies segment was approximately 1% lower than sales in 2011. In 2010, order entry exceeded sales by approximately 4%.

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Gross margins on Advanced Material Technologies sales were \$112.2 million (11% of sales) in 2011, \$113.3 million (13% of sales) in 2010 and \$68.1 million (15% of sales) in 2009.

The net change in volume and product mix shift provided a benefit to gross margin in 2011. This was evident in the increased sales to the medical market and sales of various advanced chemical products, which typically generate higher margins. These benefits were more than offset by higher manufacturing overhead costs, including the costs totaling \$1.2 million incurred by EIS, and other factors, which included a net unfavorable inventory valuation adjustment of \$3.6 million that was recorded in the fourth quarter 2011 as a result of the reconciliation of the amount of metal on hand with amounts financed. As a result of this inventory loss, we implemented additional control and reconciliation procedures in the first quarter 2012.

The gross margin as a percent of sales was lower in 2011 than in 2010 in part due to the significant increase in the metal price pass-through in sales.

The main cause for the \$45.2 million increase in gross margin in 2010 over 2009 was the margin benefit from the higher sales volume from the existing operations as well as from the two acquisitions. This margin benefit was partially offset by the incremental manufacturing overhead costs incurred by Barr and Academy totaling \$11.4 million and the increased manufacturing overhead costs incurred by the existing operations of \$0.6 million.

The 2010 margin was adversely affected by the decline in the higher margin medical market sales. Approximately 18% of Academy's sales in 2010 were silver investment bars that generate very low margins. These negative mix effects were generally offset by efficiencies and improvements in other areas. Gross margin as a percent of sales declined in 2010 from 2009 largely due to the higher precious metal price pass-through in sales in 2010 and the addition of Academy's sales, which have a very high metal content.

SG&A, R&D and other-net expenses for this segment totaled \$78.8 million (7% of sales) in 2011, \$73.8 million (8% of sales) in 2010 and \$45.5 million (10% of sales) in 2009.

Precious metal consignment fees were \$3.2 million higher in 2011 than 2010 and \$2.1 million higher in 2010 than 2009 due to the additional quantities of metal on hand (due to the production requirements and the inclusion of Academy's requirements under those lines beginning in 2010) and higher metal prices. The rate charged by the financial institutions was higher in 2011 than in 2010 as well.

Amortization expense was \$0.3 million lower in 2011 than in 2010 and \$2.3 million higher in 2010 than in 2009. The increase in 2010 was largely due to the acquisitions of Academy and Barr.

Incentive compensation expense was \$1.7 million lower in 2011 than in 2010 and \$3.9 million higher in 2010 than 2009 due to the difference in performance relative to the plans' objectives.

Corporate charges were \$2.1 million higher in 2011 than in 2010 and \$4.7 million higher in 2010 than 2009. R&D costs increased in each of the last two years in order to support the growth in the business. Various sales-related expenses increased in 2010 to support the higher volumes.

The expenses incurred by EIS subsequent to its acquisition accounted for \$1.4 million of the increase in expenses in 2011, while expenses incurred by Academy and Barr accounted for approximately 56% of the increase in expenses in 2010 over 2009.

Operating profit from Advanced Material Technologies was \$33.5 million in 2011, a decline of \$6.0 million from the operating profit of \$39.5 million generated in 2010. The margin benefits from the changes in volumes and mix were more than offset by the fourth quarter inventory valuation adjustment, higher overhead costs and the increase in consignment fees and other expenses.

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The operating profit in 2010 was a \$16.9 million improvement over the operating profit of \$22.6 million in 2009. This improvement was due to the margin benefit from the higher sales volumes and other factors offset in part by higher expenses. The Barr and Academy acquisitions contributed to the improved profit in this segment in 2010. Operating profit was 3% of sales in 2011, 4% of sales in 2010 and 5% of sales in 2009.

Performance Alloys

(Millions)	2011	2010	2009
Net sales	\$ 335.3	\$ 293.8	\$ 172.5
Operating profit (loss)	27.2	27.2	(32.3)

Performance Alloys manufactures and sells three main product families:

Strip products, the largest of the product families, include thin gauge precision strip and thin diameter rod and wire. These copper and nickel alloys provide a combination of high conductivity, high reliability and formability for use as connectors, contacts, switches, relays and shielding. Major markets for strip products include consumer electronics, telecommunications infrastructure, automotive electronics, appliance and medical;

Bulk products are copper and nickel-based alloys manufactured in plate, rod, bar, tube and other customized forms that, depending upon the application, may provide superior strength, corrosion or wear resistance, thermal conductivity or lubricity. While the majority of bulk products contain beryllium, a growing portion of bulk products sales is from non-beryllium-containing alloys as a result of product diversification efforts. Applications for bulk products include oil and gas drilling components, bearings, bushings, welding rods, plastic mold tooling, and undersea telecommunications housing equipment; and,

Beryllium hydroxide is produced at our milling operations in Utah from our bertrandite mine and purchased beryl ore. The hydroxide is used primarily as a raw material input for strip and bulk products and, to a lesser extent, by the Beryllium and Composites segment.

Strip and bulk products are manufactured at facilities in Ohio and Pennsylvania and are distributed internationally through a network of company-owned service centers and outside distributors and agents.

Sales from Performance Alloys grew 14% from \$293.8 million in 2010 to \$335.3 million in 2011. Sales in 2010 were \$121.3 million, or 70%, higher than sales of \$172.5 million in 2009. The sales growth in both years was due to improved demand from key markets (particularly in 2010), higher metal pass-through prices and other price increases.

The order entry rate was 11% lower than sales in 2011 as order entry levels started the year strong but then slowed down in the second half of the year. The slow down in the second half of the year was primarily for strip products. This slow down was mainly due to lower demand from the consumer electronics market, Performance Alloys largest market. Sales to this market declined approximately 13% in 2011 from 2010, with the entire fall-off occurring in the second half of the year. Consumer electronics sales had grown in 2010 over 2009 largely due to the use of our materials in smart phones, PDAs and other hand held devices. Sales of strip products to the appliance market, a smaller market that is primarily in Europe, were also lower in 2011 than in 2010 after growing approximately 50% in 2010 over 2009.

Sales to a number of Performance Alloys other key markets, however, have grown in each of the two most recent years. Automotive electronics sales improved over 20% in 2011 from 2010 due to solid demand in the U.S. and Europe after growing in 2010 over 2009 as sales in the first half of 2009 were weak. Sales to the energy market grew approximately 30% in 2011 over 2010 largely due to the continued strong demand for oil and gas applications. Energy market sales grew in 2010 partially as an aftermath of the Gulf oil disaster in that year as

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customers turned to our products due to their high performance characteristics. Sales to the industrial components and commercial aerospace market improved in 2010 and 2011 driven by increased demand for non-beryllium-containing alloys for heavy equipment and other applications, higher build rates for commercial aircraft that utilize our materials and other factors. Sales to the telecommunications infrastructure market increased approximately 45% in 2011 over 2010 largely as a result of higher bulk product shipments for undersea telecommunications housings.

Strip product volumes shipped declined 7% in 2011 from 2010. Volumes had increased in the first half of the year but then slowed down in the second half of the year. Strip volumes in 2010 grew 56% over the low levels in 2009. Bulk product volumes grew 6% in 2011 over 2010 after growing 70% in 2010 over 2009. Total volumes were slightly lower in 2011 than in 2010.

Average selling prices for strip and bulk products were higher in 2011 than 2010 and higher in 2010 than in 2009.

Copper prices were also higher on average in 2011 and 2010 over the respective prior year and the increased copper price pass-through accounted for an estimated \$15.1 million of the sales growth in 2011 and \$12.1 million of the sales growth in 2010.

Sales of hydroxide have grown in each of the last two years but remain relatively small at less than 4% of sales in each of the past three years.

The gross margin earned on Performance Alloys sales totaled \$74.6 million in 2011 compared to \$74.2 million in 2010. Gross margin was 22% of sales in 2011 and 25% of sales in 2010. Gross margin was \$9.0 million and only 5% of sales in 2009 largely due to the impact of the global economic crisis during that year.

The higher selling prices, changes in foreign exchange rates and other factors contributed to improved margins, but this benefit was largely offset by an unfavorable change in product mix, higher conversion cost in our extraction mill, additional manufacturing costs on nickel products, differences due to the depletion of a LIFO layer in 2010 and higher overhead costs.

The weaker product mix in 2011 was due to a 20% decline in shipments of higher beryllium-containing strip products compared to 2010. These products generally generate higher margins.

The higher conversion costs at the Utah extraction mill were primarily chemicals and other commodities used for converting the bertrandite ore into beryllium hydroxide.

Lower yields and higher scrap rates resulted in additional rework on certain nickel-containing products in 2011. These operating issues did not affect sales, but raised manufacturing costs and reduced gross margin by approximately \$3.1 million in 2011. The majority of the higher costs were incurred in the first nine months of the year as process improvements have been made.

The depletion of a LIFO inventory layer resulted in a net benefit to gross margin of \$4.4 million in 2010. This benefit did not repeat in 2011 as no significant LIFO layers were depleted nor was there a comparable benefit in 2009.

The higher sales volume was the largest cause of the improved gross margin in 2010, accounting for an estimated \$31.2 million of the increase. Production volumes were also higher in 2010 than in 2009, which, combined with other factors, led to improved manufacturing efficiencies and higher machine utilization rates. Factory labor and other direct manufacturing costs, while higher in 2010 than in 2009, did not increase proportionately with the volume increase, allowing us to leverage our production efforts. Higher selling prices for bulk and strip products also contributed to the margin increase in 2010 over 2009 as did a favorable change in the product mix. Manufacturing overhead costs increased \$2.7 million in 2010 over 2009 largely due to increases in maintenance and supply expenses offsetting a decline in utility expenses.

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Total SG&A, R&D and other-net expenses were \$47.4 million in 2011, a slight increase over the expense total of \$47.0 million in 2010. These expenses totaled \$41.3 million in 2009. These expenses were 14% of sales in 2011, 16% of sales in 2010 and 24% of sales in 2009.

R&D expenses increased a modest amount in 2011 over 2010 due to higher activity levels, while foreign currency exchange losses and corporate charges were also higher in 2011 than in 2010. These increases were largely offset by a reduction in the incentive compensation expense, due to differences in the performance levels against the plan targets between years, and the favorable resolution of the lawsuit filed against a utility provider over billing rates. Selling and administrative expenses were relatively unchanged in 2011 from 2010. SG&A, R&D and other-net expenses in 2011 were slightly higher in both the domestic and international portions of the segment.

The increased expense in 2010 on a dollar basis was due to higher incentive compensation (which resulted from the significantly improved operating results), higher commissions (due to the increased sales) and higher corporate costs. These increases were offset in part by a net decline in all of the other expenses incurred by this segment as various cost-reduction efforts implemented during the 2009 downturn remained in place throughout 2010. Closing of the distribution center operation in the United Kingdom in the fourth quarter 2009 also resulted in cost savings in 2010.

Performance Alloys generated an operating profit of \$27.2 million in 2011, unchanged from the operating profit generated in 2010 as the margin benefit from the higher sales was offset by the impact of the increased manufacturing cost of nickel products, the non-recurring LIFO inventory benefit recorded in 2010 and other factors. The operating profit in 2010 was an improvement of \$59.5 million over the operating loss of \$32.3 million in 2009. The increase in operating profit in 2010 was due to the margin generated by the higher sales, manufacturing improvements and improved pricing partially offset by changes in expenses. Operating profit was 8% of sales in 2011 and 9% of sales in 2010.

Beryllium and Composites

(Millions)	2011	2010	2009
Net sales	\$ 60.6	\$ 61.9	\$ 47.0
Operating profit (loss)	(0.8)	10.0	2.1

Beryllium and Composites manufactures beryllium-based metals and metal matrix composites in rod, sheet, foil and a variety of customized forms at its facilities in Ohio and California. These materials are used in applications that require high stiffness and/or low density and they tend to be premium-priced due to their unique combination of properties. This segment also manufactures beryllia ceramics produced at its Arizona facility. Defense and science is the largest market for Beryllium and Composites, while other markets served include industrial components and commercial aerospace, medical, energy and telecommunications infrastructure. Products are also sold for acoustics and optical scanning applications.

Sales from Beryllium and Composites were \$60.6 million in 2011, 2% lower than sales of \$61.9 million in 2010, while sales in 2010 were an improvement of \$14.9 million, or 32%, over sales of \$47.0 million in 2009.

Sales to the defense and science market, which account for about half of this segment's sales, declined approximately 8% in 2011 from 2010 due to government funding delays and project push-outs. The majority of the improvement in Beryllium and Composites' sales in 2010 over 2009 was due to higher shipments to the defense and science market.

Industrial components and commercial aerospace market sales grew in 2011 and 2010 over the respective prior year as sales of x-ray window assemblies for industrial applications have grown at a double-digit rate in each of the last two years. A portion of the growth in this market in 2010 was due to the development of new

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applications for AlBeMet[®], a metal matrix composite, in semiconductor manufacturing and inspection equipment. However, sales for this application softened in the third and fourth quarters of 2011 due to weakening conditions in the capital equipment markets. Sales of ceramic laser tubes for industrial applications also softened in 2011 partially due to the flooding in Thailand and its impact on our customers' operations.

Sales of beryllium speaker domes for acoustic diaphragm assemblies grew modestly in 2011 and 2010 but remained relatively minor. This is a niche application that may present potential growth opportunities for our materials. Sales for energy and other miscellaneous applications grew by minor amounts in 2011 over 2010 as well.

Sales to the medical market, which represent less than 10% of this segment's sales, declined approximately 10% in 2011 from 2010 after growing in 2010 over 2009. Beryllia ceramic sales for applications within the telecommunications infrastructure market also softened in 2011 after growing in 2010.

Beryllium and Composites generated a gross margin of \$12.1 million (20% of sales) in 2011 and \$21.5 million (35% of sales) in 2010 as gross margin was \$9.4 million lower in 2011 compared to 2010. Gross margin was \$11.1 million (24% of sales) in 2009.

Gross margin was reduced by an estimated \$5.3 million in 2011 due to additional costs and inefficiencies associated with the delay in the start-up of the new beryllium facility at the Elmore plant site. While the major pieces of equipment have been installed, we incurred additional costs for supplies, maintenance and other items in order to enable the simultaneous operation of all of the equipment at full production volumes. This cost also included additional amounts spent to purchase beryllium at higher prices in order to fill sales orders since the facility did not generate production level quantities of material as planned. Improvements were ongoing in the first quarter 2012 and we expect the facility to be operational in the first half of 2012.

The change in product mix was unfavorable in 2011 as compared to 2010 as defense sales, which typically generate higher margins, were lower. Higher operating costs, particularly in the fourth quarter 2011, reduced margins compared to 2010 and largely offset the benefit from the yield improvements made on welded products. The lower sales volume in 2011 had a minor impact on the decline in margins in 2011 from 2010. Lower production levels at the Arizona facility also negatively impacted gross margin in 2011. Manufacturing overhead costs were \$2.7 million higher in 2011 than in 2010 partially due to the additional ongoing overhead costs for the new facility in Elmore. Overhead costs also increased at the Fremont, California facility, primarily salaries and fringe benefits, in order to support the higher business levels there.

The gross margin improved by an estimated \$7.9 million in 2010 over 2009 as a result of the higher sales volume. The change in product mix was favorable in 2010 as compared to 2009, while manufacturing overhead costs were also lower in 2010 than in 2009 as we were able to leverage the existing cost base. The difference in input materials, use of vendor scrap and reclamation efforts provided an estimated \$0.3 million net benefit in 2010. These margin benefits were partially offset by lower manufacturing yields on welded products that reduced margins by an estimated \$1.2 million in 2010. New processes were implemented and yields on these products improved in the second half of 2010.

SG&A, R&D and other-net expenses totaled \$12.9 million (21% of sales) in 2011, \$11.5 million (19% of sales) in 2010 and \$9.0 million (19% of sales) in 2009. R&D expenses were 75% higher in 2011 than 2010 due to increased activity and various projects. Selling costs increased in 2011 over 2010 as did corporate charges while incentive compensation expense was lower. Differences in other non-operating items contributed to the higher expense level in 2011.

The main drivers for the increased expense level in 2010 were higher incentive compensation, due to the improved profitability, and higher corporate charges. Various sales and marketing support expenses, including commissions and travel, also increased in 2010 over 2009.

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Beryllium and Composites generated an operating loss of \$0.8 million in 2011 compared to an operating profit of \$10.0 million in 2010. This \$10.8 million decline in profitability was due to a reduction in gross margin caused by inefficiencies and additional costs resulting from the delay in the start-up of the new beryllium facility, additional overhead costs and other factors, and higher SG&A expenses.

Operating profit in 2010 was an improvement of \$7.9 million over the operating profit of \$2.1 million generated in 2009. This improvement was due to the margin benefit from the higher sales and other factors offset in part by an increase in expenses. Operating profit was 16% of sales in 2010 and 5% of sales in 2009.

Technical Materials

(Millions)	2011	2010	2009
Net sales	\$ 78.7	\$ 67.5	\$ 34.7
Operating profit (loss)	7.3	5.3	(2.5)

Technical Materials capabilities include clad inlay and overlay metals, precious and base metal electroplated systems, electron beam welded systems, contour profiled systems and solder-coated metal systems. These specialty strip metal products provide a variety of thermal, electrical or mechanical properties from a surface area or particular section of the material. Our cladding and plating capabilities allow for a precious metal or other base metals to be applied in continuous strip form only where it is needed, reducing the material cost to the customer as well as providing design flexibility and performance. Major applications for these products include connectors, contacts, power lead frames and semiconductors while the largest markets are automotive electronics and consumer electronics. The energy and medical markets offer further growth opportunities. Technical Materials products are manufactured at our Rhode Island facility.

Sales from Technical Materials of \$78.7 million in 2011 were 17% higher than sales of \$67.5 million in 2010. Sales in 2010 were nearly double the sales of \$34.7 million in 2009. Sales of inlay and selective plating products showed the most growth in 2011 over 2010, while sales of all major product lines were higher in 2010 than in 2009.

Sales to the automotive electronics and the consumer electronics market improved in 2011 and 2010 over the respective prior year. Automotive electronics sales grew 22% in 2011 over 2010 after more than doubling in 2010 over 2009. Consumer electronics sales were 8% higher in 2011 than 2010 and approximately 80% higher in 2010 than in 2009. A portion of the growth in consumer electronics sales in 2011 was due to an 11% increase in shipments of disk drive arm materials despite shipment levels being disrupted in the fourth quarter 2011 by flooding in Thailand that affected the downstream supply chain. Sales of disk drive arm materials grew 64% in 2010 over 2009.

Sales for solar energy, fuel cells and other alternative energy applications showed solid growth in 2011 and 2010 due to product and market development activities. Sales to the medical market also grew in each of the last two years.

The growth in sales in 2011 was partially due to higher prices and changes in product mix.

Order entry for Technical Materials was approximately 6% lower than sales in 2011 as the order entry rate slowed down during the third quarter of the year. Order entry exceeded sales by approximately 6% in 2010.

Gross margin on sales from Technical Materials was \$16.6 million (21% of sales) in 2011 compared to \$14.5 million (22% of sales) in 2010. Gross margin was \$3.5 million and 10% of sales in 2009.

The higher sales volume was the main cause for the \$2.1 million increase in gross margin in 2011 over 2010. Manufacturing overhead costs increased due to higher utility costs, maintenance and other items, but this increase was largely offset by lower inventory provision adjustments.

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The \$11.0 million increase in gross margin in 2010 over 2009 was largely due to the \$32.8 million growth in sales, while the associated higher production volumes helped generate improved manufacturing efficiencies as well. Factory labor and other direct manufacturing costs were added back in 2010 only as needed to meet the production schedule. Manufacturing overhead costs were \$0.8 million higher in 2010 than in 2009.

Various capital expenditures and other improvements implemented in recent years have resulted in a more flexible deployment of the work force that has generated operating efficiencies. While employment levels increased during 2011 and 2010, the total employment within Technical Materials was 6% lower at year-end 2011 than it was as of the end of the third quarter 2008, which was when the global economic downturn began.

SG&A, R&D and other-net expenses totaled \$9.4 million in 2011, \$9.2 million in 2010 and \$6.0 million in 2009. These expenses were 12% of sales in 2011, 14% of sales in 2010 and 17% of sales in 2009. The slight increase in the dollar amount of these expenses in 2011 over 2010 was caused primarily by higher commissions, due to the higher level of sales, and increases in fringe benefits costs and corporate charges offset in part by lower bad debt expense.

Higher selling and marketing costs, including manpower, commissions and travel expenses, were the main cause of the increase in 2010 over 2009. Incentive compensation costs and corporate charges were \$1.0 million higher in 2010 than in 2009. Other net-expenses, including the metal consignment fee and other miscellaneous items, contributed to the higher expense level in 2010 as well.

Technical Materials generated an operating profit of \$7.3 million in 2011, an improvement of \$2.0 million over the \$5.3 million of profit generated in 2010. In 2009, this segment had an operating loss of \$2.5 million. Operating profit was 9% of sales in 2011 and 8% of sales in 2010.

International Sales and Operations

We operate in worldwide markets and our international customer base continues to expand geographically due to the development of various foreign nations' economies and the relocation of U.S. businesses overseas. Our international operations are designed to provide a cost-effective method of capturing the growing overseas demand for our products over the long term.

In Asia, we have strategically located our facilities in Japan, Singapore, China, Korea, Taiwan and the Philippines. In 2011, we expanded our Asian manufacturing base with the acquisition of EIS. Our European facilities are in Germany, the United Kingdom, Ireland and the Czech Republic. These operations provide a combination of manufacturing, finishing operations, local sales support and distribution services. We also augment our sales and distribution efforts with an established network of independent distributors and agents throughout the world.

The following table summarizes total international sales by region for the last three years:

(Dollars in millions)	2011	2010	2009
Asia	\$ 203.9	\$ 216.3	\$ 163.9
Europe	147.6	127.5	73.5
Rest of world	31.5	25.3	11.8
Total	\$ 383.0	\$ 369.1	\$ 249.2
Percent of total sales	25%	28%	35%

International sales include sales from international operations and direct exports from our U.S. operations. The international sales in the above chart are included in the individual segment sales previously discussed.

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Total international sales improved approximately 4% in 2011 over 2010. Sales to Europe improved in 2011 in part due to stronger automotive electronics sales, while sales to Asia softened partially due to the weaker sales to the consumer electronics market in the second half of the year. The lower Asian sales were net of the benefit from the addition of EIS in the fourth quarter. International sales grew \$119.9 million in 2010 over 2009 as demand improved from the majority of our key markets and from all regions. Sales to Asia increased 32%, while European sales improved 73% in 2010 over 2009.

Consumer electronics, automotive electronics, appliance and telecommunications infrastructure are the larger international markets for our products. Our market share is smaller in overseas markets than it is domestically, but international markets, and Asia in particular, may present greater long-term growth opportunities.

Sales from the European and certain Asian operations are denominated in their local currencies. Exports from the U.S. and the balance of the sales from the Asian operations are typically denominated in U.S. dollars. Local competition generally limits our ability to adjust selling prices upwards to compensate for short-term unfavorable exchange rate movements.

We have a hedge program with the objective of minimizing the impact of fluctuating currency values on our consolidated operating profit. See Critical Accounting Policies below.

Legal Proceedings

One of our subsidiaries, Materion Brush Inc., is a defendant from time to time in proceedings in various state and federal courts brought by plaintiffs alleging that they have contracted chronic beryllium disease or other lung conditions as a result of exposure to beryllium. Plaintiffs in beryllium cases generally seek recovery under negligence and various other legal theories and seek compensatory and punitive damages, in many cases of an unspecified sum. Spouses, if any, often claim loss of consortium.

The following table summarizes the associated activity with beryllium cases.

	December 31,		
	2011	2010	2009
Total cases pending	0	2	4
Total plaintiffs (including spouses)	0	6	8
Number of claims (plaintiffs) filed during period ended	0(0)	1(1)	0(2)
Number of claims (plaintiffs) settled during period ended	1(3)	2(2)	3(16)
Aggregate cost of settlements during period ended (dollars in thousands)	\$ 43	\$ 20	\$ 850
Number of claims (plaintiffs) otherwise dismissed	1(3)	1(1)	2(14)

Settlement payment and dismissal for a single case may not occur in the same period.

Additional beryllium claims may arise. Management believes that we have substantial defenses in these types of cases and intends to contest the suits vigorously should they arise. Employee cases, in which plaintiffs have a high burden of proof, have historically involved relatively small losses to us. Third-party plaintiffs (typically employees of customers or contractors) face a lower burden of proof than do employees or former employees, but these cases are generally covered by varying levels of insurance.

Although it is not possible to predict the outcome of any litigation, we provide for costs related to these matters when a loss is probable and the amount is reasonably estimable. Litigation is subject to many uncertainties, and it is possible that some of these actions could be decided unfavorably in amounts exceeding our reserves. An unfavorable outcome or settlement of a beryllium case or adverse media coverage could encourage the commencement of additional similar litigation. We are unable to estimate our potential exposure to unasserted claims.

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Based upon currently known facts and our experience with beryllium cases and assuming collectibility of insurance, we do not believe that resolution of future beryllium proceedings will have a material adverse effect on our financial condition or cash flow. However, our results of operations could be materially affected by unfavorable results in one or more of these cases.

The settlement payments of \$43,000 made in 2011 and \$20,000 made in 2010 were not reimbursed by insurance since our total applicable costs were less than the annual deductible in both years.

Regulatory Matters. Standards for exposure to beryllium are under review by the United States Occupational Safety and Health Administration (OSHA) and by other governmental and private standard-setting organizations. One result of these reviews will likely be more stringent worker safety standards. Some organizations, such as the California Occupational Health and Safety Administration and the American Conference of Governmental Industrial Hygienists, have adopted standards that are more stringent than the current standards of OSHA. The development, proposal or adoption of more stringent standards may affect the buying decisions by the users of beryllium-containing products. If the standards are made more stringent and/or our customers or other downstream users decide to reduce their use of beryllium-containing products, our results of operations, liquidity and financial condition could be materially adversely affected. The impact of this potential adverse effect would depend on the nature and extent of the changes to the standards, the cost and ability to meet the new standards, the extent of any reduction in customer use and other factors. The magnitude of this potential adverse effect cannot be estimated.

FINANCIAL POSITION

Net cash provided from operations was \$56.8 million in 2011 as net income, the effects of depreciation and deferred taxes and a reduction in accounts receivable more than offset the net increase in other working capital items. Cash used in operations totaled \$11.7 million through the first three quarters of 2011 as a result of increases in receivables and inventory, contributions to the domestic pension plan, payment of the 2010 incentive compensation and changes in other items. In the fourth quarter 2011, however, a decline in receivables, coupled with other improvements, resulted in cash flow from operations of \$68.5 million in that period.

In 2010, cash provided from operations totaled \$31.0 million as net income and the effects of depreciation, deferred taxes and other items more than offset increases in working capital, primarily accounts receivable and inventory. The majority of the working capital build in 2010 occurred in the first half of the year as sales levels ramped up from the low levels in 2009.

In 2009, we generated cash flow from operations of \$41.6 million as reductions in accounts receivable and inventory, the effects of depreciation and other items more than offset the net loss for the year.

As previously noted, changes in the cost of precious and base metals are essentially passed on to customers. Therefore, while sudden movements in the price of metals can cause a temporary imbalance in our cash receipts and payments in either direction, once prices stabilize our cash flow tends to stabilize as well.

Working Capital

Cash totaled \$12.3 million as of December 31, 2011, a decline of \$3.8 million from the cash balance of \$16.1 million as of year-end 2010. The excess cash, coupled with the cash provided from operations, were used to finance the acquisition of EIS, capital expenditures, a reduction in debt and the repurchase of shares.

Cash increased \$3.8 million in 2010 over 2009 as the cash flow from operations, the increase in debt and proceeds from the exercise of stock options exceeded the cost to acquire Academy and the capital expenditure funding requirements in 2010.

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Accounts receivable of \$117.8 million at year-end 2011 was \$21.6 million, or 16%, lower than the accounts receivable balance of \$139.4 million as of year-end 2010. The decline was due to a combination of changes in the sales volume, as sales in the fourth quarter 2011 were 6% lower than sales in the fourth quarter 2010, and an improvement in the average collection period from approximately 36 days at year-end 2010 to 32 days at year-end 2011. The receivable balance increased during the first three quarters of 2011 due to the higher sales volumes and then declined significantly in the fourth quarter 2011.

The accounts receivable balance as of year-end 2010 was a \$55.4 million, or 66%, increase over the receivable balance of \$84.0 million as of year-end 2009. The main driver for the increased receivable balance was the higher level of sales. Sales in the fourth quarter 2010 were \$140.8 million, or 65%, higher than sales in the fourth quarter 2009. The days sales outstanding, a measure of how quickly receivables are collected, slowed by less than one day and had a minor impact on the increase in receivables in 2010.

The expense for accounts written off to bad debts and changes in the allowance for doubtful accounts was only \$0.1 million in 2011 and \$0.3 million in 2010. We have procedures in place to closely monitor our accounts receivable aging and to follow-up on past due accounts. We evaluate the credit position of new customers in advance of the initial sale and we evaluate our existing customers' credit positions on an ongoing basis. We will revise credit terms offered to our customers as conditions warrant in order to minimize our exposures. Credit terms may vary by country based upon local customary practice and competition. Billings for precious metals tend to have tighter payment terms than billings for other products. Advance billings are used from time to time to help reduce credit exposures and speed up the collection of cash.

Other receivables totaled \$4.6 million as of December 31, 2011 and \$4.0 million as of December 31, 2010. The majority of the amounts due at both year ends were for reimbursement for equipment purchased under a government contract. These billings are typically paid by the government on a current basis.

Inventories were \$187.2 million as of year-end 2011, an increase of \$32.7 million, or 21%, over the inventory balance of \$154.5 million as of year-end 2010 as the inventory turnover ratio, a measure of how efficiently inventory is utilized, slowed down. Inventories increased \$24.4 million, or 19%, during 2010 as inventories had been drawn down significantly in 2009 due to the global economic impact on our business that year.

Inventories at our Utah extraction mill and mine increased \$10.3 million in 2011 over 2010 due to the cyclical nature of our mining operations and the planned timing of extracting ore and the deployment of our mining resources. In 2010, Utah's inventories declined \$5.9 million as a portion of our resources were devoted to constructing a new pit during the majority of that year.

A significant portion of the increase in total inventories in both years was in Performance Alloys. Inventory pounds on hand were 15% higher at year-end 2011 than year-end 2010 after growing 33% during 2010 over year-end 2009. This growth in pounds on hand was less than the growth in pounds shipped over the two-year period.

Advanced Material Technologies' inventories grew approximately 11% in 2011 after growing approximately 8% in 2010 over 2009. A large portion of this segment's precious metal requirements are maintained on a consigned basis. The acquisition of EIS added \$2.0 million to the year-end 2011 inventory, while the acquisition of Academy in 2010 added \$0.8 million to the year-end 2010 inventory.

Technical Materials' inventory declined 17% in 2011 despite the higher level of sales due to improved efficiencies. Inventories within Technical Materials had increased approximately 32% in 2010 in order to support the increased business levels in that year.

Inventories within Beryllium and Composites increased in 2011 in part due to the timing of external purchases of input material due to the start-up issues with the new facility. Inventories had also increased in 2010 due to the higher sales volume and the timing of purchases of input materials in that year as well.

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Raw material prices, particularly prices for precious metals and copper, were volatile during 2011 and the overall average prices were higher in 2011 than in 2010. The impact of changing prices on our inventory value is minimized by the use of the LIFO costing method within our domestic operations. The LIFO method results in the current cost being charged to the income statement and the older costs being used to value the inventory on hand. See *Critical Accounting Policies* below. In addition, a portion of our metal requirements are maintained under off-balance sheet consignment arrangements. The metal is not purchased out of consignment until it is shipped to the customer.

Intangible assets were \$34.6 million at year-end 2011 compared to \$36.8 million at year-end 2010. Intangible assets increased approximately \$4.4 million during 2011 for deferred financing costs associated with new debt agreements and for the intangible assets acquired with EIS, while amortization expense was \$6.6 million.

We acquired intangible assets totaling \$4.8 million during 2010, including \$3.2 million acquired with Academy. Amortization expense was \$6.9 million in 2010. See Note E to the Consolidated Financial Statements.

Accrued salaries and wages of \$29.4 million as of year-end 2011 were \$4.6 million lower than the \$34.0 million balance as of year-end 2010. Accrued salaries and wages increased \$17.7 million in 2010 over the year-end 2009 balance. The differences in the balances between years were due to changes in the incentive compensation accruals, manpower levels, including the impact of the acquisitions, and other related factors.

Other Long-term Liabilities

Other long-term liabilities totaled \$16.5 million as of December 31, 2011, a decrease of \$1.4 million from the \$17.9 million balance as of December 31, 2010. The decline was due to the reversal of the earn out liability associated with the Barr acquisition as previously discussed, normal amortization of capital lease balances and other items.

Other long-term liabilities increased \$8.3 million during 2010. The predominant cause for this increase was the recording of the long-term portion of a 160-month, \$10.2 million capital lease for the building associated with the new beryllium facility being constructed at the Elmore plant site. This increase was partially offset by a \$0.8 million reduction in the estimated fair value of the earn out liability for the potential payments to be made to the sellers of Barr.

Retirement and Post-employment Benefits

The long-term retirement and post-employment benefit obligation was \$105.1 million as of December 31, 2011 compared to \$82.5 million at December 31, 2010.

We have a defined benefit pension plan that covers the majority of our domestic employees. The liability for this plan, which is included in the above totals, was \$63.7 million at year-end 2011 and \$44.1 million as of year-end 2010. The plan had a projected benefit obligation of \$199.2 million at year-end 2011, an increase from the projected benefit obligation of \$171.2 million at year-end 2010 largely due to the current year expense and actuarial losses, including a reduction in the discount rate. The market value of the plan assets was \$135.5 million at year-end 2011 compared to \$127.1 million at year-end 2010. This \$8.4 million increase for the year resulted from contributions of \$21.3 million less benefit payments and expenses of \$7.9 million and investment losses of \$5.0 million.

A portion of our domestic retirees and current employees are eligible to participate in a retiree medical benefit plan. The liability for this unfunded plan was \$33.2 million as of December 31, 2011, with \$30.4 million classified as long term and \$2.8 million classified as short term, and \$32.4 million as of December 31, 2010, with \$29.5 million classified as long term and \$2.9 million classified as short term. The plan expense was \$1.8 million in 2011 and \$2.0 million in 2010.

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Our subsidiary in Germany has an unfunded retirement plan for its employees, while our subsidiary in England has a funded retirement plan.

See Note I to the Consolidated Financial Statements for additional details on our retirement obligations.

Depreciation and Amortization

Depreciation, amortization and depletion expense was \$43.6 million in 2011, \$35.4 million in 2010 and \$31.9 million in 2009. The increase in 2011 over 2010 was largely due to higher mine amortization that resulted from mining ore from the new pit opened late in 2010. The majority of the increase in 2010 over 2009 was due to the acquisitions of Barr and Academy and the additional depreciation and amortization on the assets acquired.

Capital Expenditures

A summary of capital expenditures over the 2009 to 2011 timeframe is as follows:

(Millions)	2011	2010	2009
Capital expenditures	\$ 28.2	\$ 42.4	\$ 44.2
Mine development	0.6	11.3	0.8
Subtotal	28.8	53.7	45.0
Reimbursement for spending under government contract	5.4	21.9	28.2
Net spending	\$ 23.4	\$ 31.8	\$ 16.8

We have a Title III contract with the U.S. Department of Defense (DoD) for the design and development of a new facility for the production of primary beryllium. As previously noted, the equipment has been installed but work remains to bring it fully up on line and to operate at the designed and necessary levels of production. The total cost of this multi-year project is estimated to be \$100.0 million, with the DoD providing approximately 73% of the funding. The final cost of the project and the DoD's share will be determined based upon the satisfactory completion of the final construction items, resolution of any start-up issues and other factors. Spending on this project totaled \$5.1 million in 2011 compared to \$28.0 million in 2010 and was included within the capital expenditure line in the above table.

Reimbursements from the DoD are recorded as unearned income, a liability on the Consolidated Balance Sheet. See Critical Accounting Policies below for further discussion. The spending and reimbursement received from the government may differ in a given year due to the normal lag between when the spending occurs and the government issues the reimbursement.

Since 2000, all of our metallic beryllium requirements have been supplied from materials purchased from the National Defense Stockpile and international vendors. Successful completion of this project will allow for the creation of the only domestic facility capable of producing primary beryllium.

Advanced Material Technologies' capital spending was \$8.0 million in 2011 compared to \$5.2 million in 2010 and \$4.5 million in 2009. Spending in 2011 included an expansion to the refining and shield kit cleaning operations equipment at the Buffalo, New York facility, the initial phase of an expansion to the Singapore operations, new ventilation and safety equipment at the New Mexico operations and a number of smaller projects throughout the segment.

Capital spending by Performance Alloys, including mine development costs, totaled \$10.6 million in 2011, \$17.1 million in 2010 and \$3.8 million in 2009. Major projects in 2011 included a new dross reclamation system, upgrades to the casting operations and new rod, bar and tube processing equipment. Spending in 2011 also included \$1.5 million for the purchase of a building at the Elmore, Ohio facility that was previously held under an operating lease. Mine development costs were higher in 2010 due to the completion of a major new pit. We began extracting ore from this pit in the fourth quarter 2010. Performance Alloys' capital spending increased in 2010 over 2009 due to the improved profitability and cash flow in 2010.

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In addition to the new beryllium plant, capital spending within the Beryllium and Composites segment included spending on new machine shop equipment and other miscellaneous projects.

Technical Materials capital spending included upgrades to the electron beam welding equipment, modifications to other manufacturing equipment and various infrastructure projects.

We also continued work on software upgrades and implementations at various facilities during the 2009 to 2011 timeframe.

Capacity expansion projects, including the new beryllium facility, accounted for approximately 36% of the capital spending in 2011, while new technology projects accounted for approximately 19% of the 2011 spending. The balance of the capital spending in 2011 was on maintenance capital projects and mine development.

Acquisitions

In addition to the above capital expenditures, we acquired the following businesses in the 2009 to 2011 time frame:

(Dollars in millions)	Year	Cost	Acquired Goodwill
EIS Optics Limited	2011	\$ 23.9	\$ 11.1
Academy Corporation	2010	21.0	5.4
Barr Associates, Inc.	2009	55.2	31.7

The EIS goodwill and opening balance sheet valuations were preliminary as of year-end 2011 as we were still assessing deferred taxes, the final adjustments to the purchase price in accordance with the terms of the purchase agreement and other items. The Academy acquisition cost is shown net of \$1.7 million we received back from the sellers in 2010 subsequent to the purchase as a result of the resolution of valuation adjustments in accordance with the purchase agreement. Each of these three acquisitions was financed with a combination of cash on hand and borrowings under the revolving credit agreement. The value of the assigned goodwill from each transaction was determined with the assistance of independent valuation experts. See Note B to the Consolidated Financial Statements.

Debt

Outstanding debt totaled \$81.4 million as of year-end 2011, a decline of \$4.7 million from the total debt of \$86.1 million outstanding as of December 31, 2010. Debt increased \$26.2 million during the first three quarters of 2011 in order to fund, in part, the higher levels of working capital, the contributions to the domestic defined benefit pension plan and capital expenditures. However, during the fourth quarter 2011, despite the acquisition of EIS, debt declined \$30.9 million largely due to a reduction in accounts receivable during that period. Short-term debt totaled \$40.9 million as of year-end 2011, while long-term debt was \$40.5 million.

The outstanding debt at year-end 2010 was \$21.6 million higher than the balance of \$64.5 million as of December 31, 2009. The majority of this increase occurred in the first quarter 2010 as a result of funding a portion of the acquisition of Academy and an increase in working capital. Short-term debt totaled \$47.8 million while long-term debt totaled \$38.3 million as of year-end 2010.

In the third quarter 2011, we negotiated a new five-year \$325.0 million revolving credit agreement to replace the former \$240.0 million revolving credit agreement that was scheduled to mature in the fourth quarter 2012. The new agreement provides for a committed revolving credit facility and is comprised of sub-facilities for revolving loans, swing line loans, letters of credit and foreign currency denominated borrowings. In addition to the higher borrowing capacity, various provisions relating to allowable unsecured debt, acquisitions and other items were revised in the new agreement to provide increased flexibility. The key financial covenants in the new agreement, including a leverage ratio and fixed charge coverage ratio, are similar to those contained in the former agreement.

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In the second quarter 2011, we entered into a new \$8.0 million debt agreement with the Toledo-Lucas County Port Authority and the Dayton-Montgomery County Port Authority to fund capital expenditures at our Ohio facilities. Proceeds totaling \$3.2 million were used during 2011, with the balance of the proceeds being held in escrow to be drawn down as the applicable capital expenditures are incurred. The agreement calls for monthly installment payments and a \$1.1 million balloon payment upon maturity in ten years.

We were in compliance with all of our debt covenants as of December 31, 2011.

Shareholders Equity

Shareholders equity was \$406.0 million as of year-end 2011, an increase of \$21.6 million over the balance of \$384.4 million as of year-end 2010. Equity also increased \$44.5 million in 2010. Comprehensive income, which includes net income, changes in the cumulative translation adjustment, changes in the fair value of derivatives and adjustments to the carrying value of the pension and other post-employment benefit liabilities that are charged directly to equity, was \$19.4 million in 2011 and \$41.5 million in 2010.

We received \$0.7 million from the exercise of approximately 53,000 options in 2011 and \$2.6 million from the exercise of approximately 154,000 options in 2010.

We repurchased approximately 132,000 shares of our common stock at a cost of \$3.8 million in 2011 under a share buyback program initially approved by the Board of Directors in 2008. The primary purpose of the buyback program is to offset a portion of the dilution caused by stock compensation plans. We repurchased 150,000 shares of our common stock at a cost of \$3.5 million in 2010 under this program.

Equity was also affected by stock-based compensation expense, the tax benefits on stock compensation realization and other factors in both 2011 and 2010.

Off-balance Sheet Obligations

We maintain the majority of the precious metals we use in production on a consignment basis in order to reduce our exposure to metal price movements and to reduce our working capital investment. In 2010, we began consigning a portion of our copper requirements as well. See Item 7A of this Form 10-K. The notional value of the off-balance sheet inventory was \$244.0 million as of year-end 2011 and \$211.8 million as of year-end 2010. This increase was caused by a combination of higher metal prices and higher quantities of metal on hand.

We were in compliance with all of the covenants contained in the consignment agreements as of December 31, 2011.

Contractual Obligations

A summary of payments to be made under long-term debt agreements, operating leases, significant capital leases, pension plan contributions and material purchase commitments by year is as follows:

(Millions)	2012	2013	2014	2015	2016	There- after	Total
Long-term debt	\$ 0.5	\$ 0.6	\$ 0.6	\$ 0.7	\$ 34.0	\$ 4.6	\$ 41.0
Non-cancelable lease payments	7.2	6.0	4.3	3.7	3.4	14.1	38.7
Capital lease payments	1.2	1.1	1.1	1.1	1.0	6.8	12.3
Pension plan contribution	11.2						11.2
Purchase commitments	4.5						4.5
Total	\$ 24.6	\$ 7.7	\$ 6.0	\$ 5.5	\$ 38.4	\$ 25.5	\$ 107.7

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The long-term debt repayment in 2016 includes \$25.0 million borrowed under the revolving credit agreement as of year-end 2011. While this agreement matures in 2016, we anticipate that we will renegotiate a new agreement prior to the maturity date as we have done previously. However, we cannot guarantee that a replacement facility will have similar terms as the existing facility. See Note F to the Consolidated Financial Statements for additional debt information.

The non-cancelable lease payments represent payments under operating leases with initial lease terms in excess of one year as of December 31, 2011. The capital lease payments include the building for the new beryllium facility at the Elmore site and other material capital leases. See Note G to the Consolidated Financial Statements for further leasing details.

The pension plan contribution of \$11.2 million in the above table represents our best estimate of the required 2012 contribution to the domestic defined benefit plan as of early 2012. Contributions to the plan are designed to comply with ERISA guidelines, which change from time to time, and are based upon the plan's funded ratio, which is affected by actuarial assumptions, investment performance, benefit payouts, plan expenses, amendments and other factors. Therefore, it is not practical to estimate contributions to the plan beyond one year. Contributions in excess of \$11.2 million may be made to the plan in 2012.

The purchase commitments of \$4.5 million are for capital equipment to be acquired in 2012 based on orders placed with vendors as of December 31, 2011.

Liquidity

We believe that cash flow from operations plus the available borrowing capacity and the current cash balance are adequate to support operating requirements, capital expenditures, projected pension plan contributions, environmental remediation projects and strategic acquisitions.

The cumulative cash flow provided from operations totaled \$129.5 million in 2009 through 2011, while capital expenditures, net of amounts reimbursed by the government, totaled \$72.0 million. The cash flow from operations includes contributions to the domestic pension plan of \$53.1 million during this three-year period.

A summary of key data relative to our liquidity, including the outstanding debt, cash balances, available borrowing capacity and the debt-to-debt-plus-equity ratio, as of the end of each of the last three years is as follows:

(Dollars in millions)	December 31,		
	2011	2010	2009
Total outstanding debt	\$ 81.4	\$ 86.1	\$ 64.5
Cash	12.3	16.1	12.3
Debt net of cash	\$ 69.1	\$ 70.0	\$ 52.2
Available borrowing capacity	\$ 274.9	\$ 173.0	\$ 46.3
Debt-to-debt-plus-equity ratio	17%	18%	16%

Debt net of cash is a non-GAAP measure. We are providing this information because we believe it is more indicative of our overall financial position. It is also a measure our management uses to assess financing and other decisions.

Debt net of cash increased \$16.9 million over the two-year period from December 31, 2009 to December 31, 2011. During this time frame, we acquired Academy for \$21.0 million and EIS for \$23.9 million and we repurchased \$7.3 million of our common stock. The increase in debt net of cash was less than these outlays due to the cash flow from operations exceeding capital spending.

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Our available borrowing capacity has increased over the last two years as a result of our improved operating performance and the renegotiated credit agreement. The available borrowing capacity in the table above represents the additional amounts that could be borrowed under the revolving credit agreement and other secured lines existing as of December 31 of each year depicted. The applicable debt covenants have been taken into account when determining the available borrowing capacity, including the covenant that restricts the borrowing capacity to a multiple of the twelve-month trailing earnings before interest, income taxes, depreciation and amortization and other adjustments.

The renegotiated revolving credit agreement provides a stable borrowing platform for the next five years with an expanded borrowing capacity and more favorable terms than the prior agreement.

The new debt agreement that funds capital expenditures in Ohio also provided an additional source of capital in 2011.

As of early in the first quarter 2012, we do not know of any future or pending changes that will cause us to be in non-compliance with any of our debt covenants in the near term.

As a result of the decline in debt and an increase in equity in 2011, the debt-to-debt-plus-equity ratio, a measure of balance sheet leverage, improved from 18% at year-end 2010 to 17% at year-end 2011. We believe that our cash flow from operations can support this level of leverage over the long term.

The working capital ratio, which compares current assets excluding cash to current liabilities excluding debt, was 3.6 to 1.0 as of year-end 2011 compared to 3.4 to 1.0 as of year-end 2010.

Portions of our business utilize off-balance sheet consignment arrangements to finance their metal requirements. While the increasing metal prices over the last two years have put pressure on the consignment line limitations from time to time, we negotiated an increase to the available capacity under these arrangements during 2011. The available and unused capacity under the metal financing lines totaled approximately \$119.6 million as of December 31, 2011.

Cash on hand does not affect the covenants or the borrowing capacity under our debt agreements. Portions of the cash balances may be invested in high quality, highly liquid investments with maturities of three months or less.

In July 2010, our Board of Directors re-authorized the Company to purchase up to 700,000 shares of our common stock, which represent approximately 3% of our outstanding shares. The primary purpose of this program is to offset the dilution created through shares issued under stock-based compensation plans. Any stock repurchases will be made from time to time for cash in the open market or otherwise, including without limitation, in privately negotiated transactions and round lot or block transactions on the New York Stock Exchange, and may be made pursuant to accelerated share repurchases or Rule 10b5-1 plans. The repurchase program may be suspended or discontinued at any time.

ENVIRONMENTAL

We have an active environmental compliance program. We estimate the probable cost of identified environmental remediation projects and establish reserves accordingly. The environmental remediation reserve balance was \$5.3 million at December 31, 2011 and \$5.2 million at December 31, 2010. Payments against the reserve totaled \$0.2 million in 2011 and \$0.7 million in 2010. See Note J to the Consolidated Financial Statements.

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We have proven and probable reserves of beryllium-bearing bertrandite ore in Juab County, Utah. Proven reserves are the measured quantities of ore commercially recoverable through the open-pit method. Probable reserves are the estimated quantities of ore known to exist but have been computed from inspection sites that are farther apart than those used to measure proven reserves. Although the inspection sites are fewer, assurance levels are sufficient to assume ore continuity. Ore dilution of approximately seven percent occurs during the mining process. The ore is processed at our extraction facility in Utah. Approximately 87% of the beryllium in ore is recovered in the extraction process.

We use computer models to estimate ore reserves, which are subject to economic and physical evaluation. The requirement that reserves pass an economic test causes open-pit mineable ore to be found in both proven and probable geologic settings. Proven reserves have decreased slightly in each of the last four years, while probable reserves have remained unchanged over the same time period. Based upon average production levels in recent years and our near-term production forecasts, proven reserves would last over seventy-five years. The following table summarizes our proven and probable reserves and the quantity of ore processed over the last five years. Ore reserves classified as possible are excluded from the table.

	2011	2010	2009	2008	2007
Proven bertrandite ore reserves at year end (thousands of dry tons)	6,341	6,404	6,425	6,454	6,531
Grade % beryllium	0.265%	0.266%	0.266%	0.266%	0.266%
Probable bertrandite ore reserves at year end (thousands of dry tons)	3,519	3,519	3,519	3,519	3,519
Grade % beryllium	0.232%	0.232%	0.232%	0.232%	0.232%
Bertrandite ore processed (thousands of dry tons, diluted)	70	56	39	64	52
Grade % beryllium, diluted	0.381%	0.336%	0.330%	0.321%	0.321%

We own approximately 95% of the proven reserves, with the remaining reserves leased. We augment our proven reserves of bertrandite ore through the purchase of imported beryl ore from time to time. This ore, which is approximately 4% beryllium, is also processed at the Utah facility.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements requires the inherent use of estimates and management's judgment in establishing those estimates. The following are the most significant accounting policies we use that rely upon management's judgment.

Accrued Liabilities. We have various accruals on our balance sheet that are based in part upon management's judgment, including accruals for litigation, environmental remediation and workers' compensation costs. We establish accrual balances at the best estimate determined by a review of the available facts and trends by management and independent advisors and specialists as appropriate. Absent a best estimate, the accrual is established at the low end of the estimated reasonable range in accordance with accounting guidelines. Litigation and environmental accruals are established only for identified and/or asserted claims; future claims, therefore, could give rise to increases to the accruals. The accruals are adjusted as facts and circumstances change. The accruals may also be adjusted for changes in our strategies or regulatory requirements. Since these accruals are estimates, the ultimate resolution may be greater or less than the established accrual balance for a variety of reasons, including court decisions, additional discovery, inflation levels, cost control efforts and resolution of similar cases. Changes to the accruals would then result in an additional charge or credit to income in the period when the change was made. See Note J to the Consolidated Financial Statements.

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Legal claims may be subject to partial or complete insurance recovery. The accrued liability is recorded at the gross amount of the estimated cost and the insurance recoverable, if any, is recorded as an asset and is not netted against the liability. The accrued legal liability includes the estimated indemnity cost only, if any, to resolve the claim through a settlement or court verdict. The legal defense costs are not included in the accrual and are expensed in the period incurred, with the level of expense in a given year affected by the number and types of claims we are actively defending.

Non-employee claims for beryllium disease made prior to 2022 where any of the alleged exposure period is prior to year-end 2007 are covered by insurance. The insurance covers defense costs and indemnity payments (resulting from settlements or court verdicts) and is subject to a \$1.0 million annual deductible. In 2011, defense and indemnity costs were less than the deductible.

Pensions. We have a defined benefit pension plan that covers a large portion of our current and former domestic employees. Carrying values of the associated pension assets and liabilities are determined on an actuarial basis using numerous actuarial and financial assumptions. Differences between the assumptions and current period actual results are typically deferred into the net pension asset or liability value and amortized against future income under established guidelines. The deferral process generally reduces the volatility of the recognized net pension asset or liability and current period income or expense. Unrealized gains or losses are recorded in other comprehensive income (OCI), a component of shareholders' equity.

Management annually reviews key pension plan assumptions, including the expected return on plan assets, the discount rate and the average wage rate increase, against actual results, trends, Company strategies, the current and projected investment environment and industry standards and makes adjustments accordingly. The actuaries adjust certain assumptions to reflect changes in demographics and other factors, including mortality rates and employee turnover, annually as warranted. These adjustments may then lead to a higher or lower expense in future periods.

We establish the discount rate used to determine the present value of the projected and accumulated benefit obligation at the end of each year based upon the available market rates for high quality, fixed income investments whose maturities match the plan's projected cash flows. An increase to the discount rate would reduce the present value of the projected benefit obligation and future pension expense and, conversely, a lower discount rate would raise the benefit obligation and future pension expense. We elected to use a discount rate of 4.75% as of December 31, 2011 and 5.50% as of December 31, 2010.

Our pension plan investment strategies are governed by a policy adopted by the Board of Directors. Management uses a group of outside investment analysts and brokerage firms to implement these strategies. The future return on pension assets is dependent upon the plan's asset allocation, which changes from time to time, and the performance of the underlying investments. As a result of our review of various factors, we reduced the expected rate of return on plan assets assumption to 7.75% as of December 31, 2011 from an assumption of 8.00% as of December 31, 2010. The plan investments generated a loss of approximately 3.7% in 2011 after generating gains of 13.4% in 2010 and 16.7% in 2009. The expected rate of return assumption relates to the long term and given changes in risk assumptions, projections of future returns by type of investment and other factors, we believe that a 7.75% return over the long term is a reasonable assumption. Should the assets earn an average return less than 7.75% over time, in all likelihood the future pension expense would increase. Investment earnings in excess of 7.75% would tend to reduce the future expense.

The impact on the pension expense of a change in discount rate or expected rate of return assumption can vary from year to year depending upon the undiscounted liability level, the current discount rate, the asset balance, other changes to the plan and other factors. If the December 31, 2011 discount rate were reduced by 25 basis points (0.25%) and all other pension assumptions remained constant, then the 2012 projected pension expense would increase by approximately \$0.7 million. If the expected rate of return assumption was reduced by 25 basis points and all other pension assumptions remained constant, the 2012 projected pension expense would increase by approximately \$0.4 million.

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Based upon current assumptions, guidelines and estimates, we project the required cash contribution to be made to the plan will be \$11.2 million in 2012. Additional contributions may be made during 2012 based upon a number of factors, including the performance of the plan investments, the plan's actual funded ratio, the discount rate environment, the Company's operating performance, the availability of excess cash and borrowing rates under available credit lines.

The pension liability is recalculated at the measurement date (December 31 of each year) and any adjustments to this account and OCI will be recorded at that time accordingly. See Note I to the Consolidated Financial Statements for additional details on our pension and other retirement plans.

LIFO Inventory. The prices of certain major raw materials that we use, including copper, nickel, gold, silver and other precious metals, fluctuate during a given year. Overall prices on average were higher in 2011 than in 2010.

Where possible, such changes in material costs are generally reflected in selling price adjustments, particularly with precious metals and copper. The prices of labor and other factors of production, including supplies and utilities, generally increase with inflation. Portions of these cost increases may be offset by manufacturing improvements and other efficiencies. From time to time, we will revise our billing practices to include an energy surcharge in attempts to recover a portion of our higher energy costs from our customers. However, market factors, alternative materials and competitive pricing may limit our ability to offset all cost increases with higher prices.

We use the LIFO method for costing the majority of our domestic inventories. Under the LIFO method, inflationary cost increases are charged against the current period cost of goods sold in order to more closely match the cost with the associated revenue. The carrying value of the inventory is based upon older costs and, as a result, the LIFO cost of the inventory on the balance sheet is typically, but not always, lower than it would be under most alternative costing methods. The LIFO cost may also be lower than the current replacement cost of the inventory. The LIFO inventory value tends to be less volatile during years of fluctuating costs than the inventory value would be using other costing methods.

The LIFO impact on the income statement in any given year is dependent upon the inflation rate effect on raw material purchases and manufacturing conversion costs, the level of purchases in a given year and changes in the inventory mix and quantities. Assuming no change in the quantity or mix of inventory from the December 31, 2011 level, a 100 basis point change in the annual inflation rate would cause a change of approximately \$0.7 million in the LIFO inventory value.

Deferred Tax Assets. We record deferred tax assets and liabilities based upon the temporary difference between the financial reporting and tax bases of assets and liabilities. We review the expiration dates of the deferrals against projected income levels to determine if the deferral will or can be realized. If it is determined that it is more likely than not that a deferral will not be realized, a valuation allowance would be established for that item. Certain deferrals do not have an expiration date. We will also evaluate deferred tax assets for impairment due to cumulative operating losses and record a valuation allowance as warranted. A valuation allowance may increase tax expense and reduce net income in the period it is recorded. If a valuation allowance is no longer required, it will reduce tax expense and increase net income in the period that it is reversed.

We had valuation allowances of \$3.9 million associated with state and foreign deferred tax assets as of year-end 2011 primarily for net operating loss carryforwards.

See Note P to the Consolidated Financial Statements for additional deferred tax details.

Unearned revenue. Billings to customers in advance of the shipment of the goods are initially recorded as unearned revenue, which is a liability on the balance sheet. This liability is subsequently reversed when the revenue is recognized. Revenue and the related cost of sales and gross margin are only recognized for these

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transactions when the goods are shipped, title passes to the customer and all other revenue recognition criteria are satisfied. The related inventory also remains on our balance sheet until these revenue recognition criteria are met. Advanced billings are typically made in association with products with long manufacturing times and/or products paid with funds from a customer's contract with the government. Billings in advance of the shipments allow us to collect cash earlier than billing at the time of the shipment and, therefore, the collected cash can be used to help finance the underlying inventory. The unearned revenue balance was \$3.0 million as of year-end 2011.

Long-term unearned income. Expenditures for capital equipment to be reimbursed under government contracts are initially recorded in construction in progress. Reimbursements for those expenditures are recorded in unearned income, a liability on the balance sheet. The total cost of the assets to be constructed includes costs reimbursed by the government as well as costs borne by us. When the assets are placed in service and capitalized, this total cost will be depreciated over the useful life of the assets. The unearned income liability will be reduced and credited to income ratably with the annual depreciation expense. This benefit in effect will reduce the net expense charged to the income statement to an amount equal to the depreciation on the portion of the cost of the assets borne by us.

Capital expenditures subject to reimbursement from the government under the life of the current DoD project and the related unearned income balance totaled \$62.5 million as of December 31, 2011. We anticipate that the associated equipment will be placed in service during 2012.

Derivatives. We may use derivative financial instruments to hedge our foreign currency, commodity and precious metal price and interest rate exposures. We apply hedge accounting when an effective hedge relationship can be documented and maintained. The effective portion of the change in a cash flow hedge's fair value is recorded in OCI until the underlying hedged item matures. If a hedge does not qualify as effective, changes in its fair value are recorded against income in the current period. If a derivative is deemed to be a hedge of the fair value of a balance sheet item, the change in the derivative's value will be recorded in income and will offset the change in the fair value of the hedged item to the extent that the hedge is effective.

We secure derivatives with the intention of hedging existing or forecasted transactions only and do not engage in speculative trading or holding derivatives for investment purposes. Our annual budget, quarterly forecasts, monthly estimates and other analyses serve as the basis for determining forecasted transactions. The use of derivatives is governed by policies established by the Board of Directors. These policies provide guidance on the allowable types of hedge contracts, the allowable duration of the contracts and other related matters. Hedge contracts are approved by senior financial managers at our corporate office. The level of derivatives outstanding at a particular point in time may be limited by the availability of credit from financial institutions.

Our practice has been to secure hedge contracts denominated in the same manner as the underlying exposure; for example, a yen exposure will only be hedged with a yen contract and not with a surrogate currency. We also typically secure contracts through financial institutions that are already part of our bank group.

See Note H to the Consolidated Financial Statements and Item 7A of this Form 10-K.

OUTLOOK

While sales set a record in 2011, the order entry rate slowed down in the fourth quarter 2011 largely due to softer demand from the consumer electronics market. However, we believe that a portion of this softness may have been due to downstream inventory corrections as the decline in our order pattern was greater than the change in spending by the end-use consumers and that our order level will improve as our customers will need to replenish their inventories in 2012. Because of the performance characteristics of our materials, we are well-positioned in the consumer electronics market and we serve a number of applications, including smart phones, various other handheld devices and LEDs, that have solid long-term growth potential.

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Demand levels from various other markets remained solid in early 2012, including the oil and gas and architectural glass sectors of the energy market, portions of our industrial markets and the automotive market. Our sales to the medical market improved in 2011 and we are anticipating that improvement to continue in 2012. New product development added to our sales in 2011 and we anticipate that this will continue in various markets, including solar and other alternative energy applications. A full year of EIS's results should have a minor positive impact on our sales in 2012.

Defense and science sales and orders have weakened due to pressures on government spending levels and it is difficult to project what future government budgets will entail. We believe that the softness within our traditional beryllium-based defense business is primarily due to push-outs of orders as opposed to cancellations or lost applications while our defense customers within our optics business tend to be very uncertain about future funding levels and the related impact on various projects.

We are cautious about the state of the U.S. economy and, in particular, the level of unemployment and government deficits and their related impact on consumer and industrial spending that could potentially affect our sales and costs. We are also monitoring the current economic conditions in Europe and the instability of their financial markets.

As of early in the first quarter 2012, we are estimating that our sales in 2012 should be 5% to 10% higher than sales in 2011.

Raw material costs, primarily precious metals and copper, have been volatile but remain at fairly high levels. While we typically pass these higher costs on to our customers, at these high levels, some customers may investigate alternative pricing and supply arrangements or may turn to alternative materials. The higher precious metal and copper prices will also lead to higher consignment fees, which typically are not passed on to the customer.

Our fringe benefit costs will increase in 2012, primarily due to higher pension and other retirement plan costs as well as a result of medical cost inflation.

We believe our profit margins in 2012 should benefit from various costs incurred in 2011 not repeating to the same extent or at all in 2012, including:

the rebranding of our company was completed in 2011 and while the legal and administrative costs associated with this project should not repeat in 2012, a portion of the related advertising and marketing efforts will continue in order to fully leverage the rebranding efforts;

the inefficiencies and other costs we incurred in 2011 to bring the new beryllium plant on line in 2011 should not continue at the same level in 2012 as we anticipate that the plant will become operational during the year; and

the one-time acquisition costs of \$1.8 million in 2011 should not repeat in 2012 unless we pursue other acquisitions.

The level of capital investment in 2012 will be somewhat dependent upon the actual and projected levels of profitability, cash flow from operations and borrowings levels. As of early in the first quarter 2012, we anticipate capital spending in 2012 to be similar to or slightly higher than the spending level in 2011. We also anticipate that we will begin construction of a new pit at our Utah mining operations during the year.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to precious metal and commodity price, interest rate, foreign exchange rate and utility cost differences. While the degree of exposure varies from year to year, our methods and policies designed to manage these exposures have remained fairly consistent over time. Generally, we attempt to minimize the effects of these

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exposures through the use of natural hedges, which include pricing strategies, borrowings denominated in the same terms as the exposed asset, off-balance sheet arrangements and other methods. Where we cannot use a natural hedge, we may use derivative financial instruments to minimize the effects of these exposures when practical and cost efficient. The use of derivatives is subject to policies approved by the Board of Directors with oversight provided by a group of senior financial managers at our corporate office.

We use gold and other precious metals in manufacturing various products. To reduce the exposure to market price changes, the majority of our precious metal requirements are maintained on a consigned inventory basis. We purchase the metal out of consignment from our suppliers when it is ready to ship to a customer as a finished product. Our purchase price forms the basis for the price charged to the customer for the precious metal content and, therefore, the current cost is matched to the selling price and the price exposure is minimized. The use of precious metal consignment arrangements is governed by a policy approved by the Board of Directors.

We are charged a consignment fee by the financial institutions that own the precious metals. This fee is partially a function of the market price of the metal. Because of market forces and competition, the fee can only be charged to customers in a limited case-by-case basis. To further limit price and financing rate exposures, under some circumstances, we will require customers to furnish their own metal for processing. Customers may also elect to provide their own material for us to process as opposed to purchasing our material. Should the market price of precious metals that we have on consignment increase by 20% from the prices on December 31, 2011, the additional pre-tax cost to us as a result of an increase in the consignment fee would be approximately \$1.3 million on an annual basis. This calculation assumes no changes in the quantity of inventory or the underlying fee and that none of the additional fees are charged to customers.

The available capacity of our existing credit lines to consign precious metals is a function of the quantity and price of the metals on hand. As prices increase, a given quantity of metal will utilize a larger proportion of the existing credit lines. A significant prolonged increase in metal prices could result in our credit lines being fully utilized, and, absent securing additional credit line capacity from a financial institution, could require us to purchase precious metals rather than consign them, require customers to supply their own metal and/or force us to turn down additional business opportunities. If we were in a significant precious metal ownership position, we might elect to use derivative financial instruments to hedge the potential price exposure. The cost to finance and potentially hedge the purchased inventory may also be higher than the consignment fee. The financial statement impact of the risk from rising metal prices impacting our credit availability cannot be estimated at the present time.

In certain circumstances, we may elect to fix the price of precious metal for a customer for a stated quantity over a specified period of time. In those cases, we may secure hedge contracts whose terms match the terms in the agreement with our customer so that the gain or loss on the contract with the customer due to subsequent movements in the precious metal price will generally be offset by a gain or loss on the hedge contract. At year-end 2011, we had hedge contracts to purchase and sell gold with a notional value of \$15.8 million. A metal price decline of 10% from the year-end price would result in a net additional pre-tax expense of approximately \$0.2 million in 2012. This calculation does not take into account the additional net gain that would be recorded on the underlying hedged transactions with the customer.

We also use copper in our production processes. When possible, fluctuations in the purchase price of copper are passed on to customers in the form of price adders or reductions. While over time our price exposure to copper is generally in balance, there can be a lag between the change in our cost and the pass-through to our customers, resulting in higher or lower margins in a given period.

We consign a portion of our copper inventory requirements. As with precious metals, the available capacity under the existing lines is a function of the quantity and price of metal on hand. Should the market cost of copper increase by 20% from the price as of December 31, 2011, the additional pre-tax cost to us as a result of an increase in the consignment fee would be approximately \$0.2 million on an annual basis. This calculation assumes no changes in the quantity of inventory or the underlying fee and that none of the additional fees are charged to customers.

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In our manufacturing processes, we use ruthenium and other base and precious metals that are not widely used by others or actively traded and, therefore, there is no established efficient market for derivative financial instruments that could be used to effectively hedge the related price exposures. For certain applications, our pricing practice with respect to these metals is to establish the selling price based upon our cost to purchase the material, limiting our price exposure. However, the inventory carrying value may be exposed to market fluctuations. The inventory value is maintained at the lower of cost or market and if the market value were to drop below the carrying value, the inventory would have to be reduced accordingly and a charge taken against cost of sales. This risk is mainly associated with long manufacturing lead time items and with sludges and scrap materials, which generally have longer processing times to be refined into a usable form for further manufacturing and are typically not covered by specific sales orders from customers. We did not record any lower of cost or market charges in 2011 as a result of market price fluctuations while we recorded lower of cost or market charges totaling \$0.4 million in 2010 and \$0.7 million in 2009.

We are exposed to changes in interest rates on portions of our debt and cash balances. This interest rate exposure is managed by maintaining a combination of short-term and long-term debt and variable and fixed rate instruments. We may also use interest rate swaps to fix the interest rate on variable rate obligations, as we deem appropriate. There were no interest rate derivatives outstanding as of December 31, 2011. Excess cash is typically invested in high quality instruments that mature in ninety days or less. Investments are made in compliance with policies approved by the Board of Directors. Assuming no change in the amount or make-up of the outstanding debt as of December 31, 2011, a 200 basis point movement upwards in the interest rates would increase our annual interest expense by \$1.0 million.

Portions of our international operations sell products priced in foreign currencies, mainly the euro and yen, while the majority of these products costs are incurred in U.S. dollars. We are exposed to currency movements in that if the U.S. dollar strengthens, the translated value of the foreign currency sale and the resulting margin on that sale will be reduced. We typically cannot increase the price of our products for short-term exchange rate movements because of local competition. To minimize this exposure, we may purchase foreign currency forward contracts, options and collars in compliance with Board approved policies. If the dollar strengthened, the decline in the translated value of our margins would be at least partially offset by a gain on the hedge contract. A decrease in the value of the dollar would result in larger margins but potentially a loss on the contract, depending upon the method used to hedge the exposure. We may also elect not to hedge 100% of the forecasted exposure.

The notional value of the outstanding currency contracts was \$38.6 million as of December 31, 2011. If the dollar weakened 10% against the currencies we have hedged from the December 31, 2011 exchange rates, the reduced gain and/or increased loss on the outstanding contracts as of December 31, 2011 would reduce pre-tax profits by approximately \$3.7 million in 2012. This calculation does not take into account the increase in margins as a result of translating foreign currency sales at the more favorable exchange rates, any changes in margins from potential volume fluctuations caused by currency movements or the translation effects on any other foreign currency denominated income statement or balance sheet item.

The fair value of the outstanding foreign currency contracts was a net asset of \$1.4 million at December 31, 2011, indicating that the average hedge rates were favorable compared to the actual year-end market exchange rates.

The cost of natural gas and electricity used in our operations may vary from year to year and from season to season. We attempt to minimize these fluctuations and the exposure to higher costs by utilizing fixed price agreements of set durations, when deemed appropriate, obtaining competitive bidding between regional energy suppliers and other methods.

We are exposed to changes in global economic conditions and the potential impact those changes may have on various facets of our business. We have a program in place to closely monitor the credit worthiness and financial condition of our key providers of financial services, including our bank group and insurance carriers, as well as the credit worthiness of customers and vendors and have various contingency plans in place.

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Our bank lines, including lines for credit, consignment and hedging, are with a bank group each of whom has remained solvent through the economic crisis in recent years. Overall, the capacity under our lines has increased in the last two years. However, the financial statement impact from the risk of one or more of the banks in our bank group becoming insolvent cannot be estimated at the present time.

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Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Management's Report on Internal Control over Financial Reporting

The management of Materion Corporation and subsidiaries are responsible for establishing and maintaining adequate internal controls over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Materion Corporation and subsidiaries' internal control system was designed to provide reasonable assurance to the Company's management and Board of Directors regarding the preparation and fair presentation of published financial statements. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Materion Corporation and subsidiaries' management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2011. In making this assessment, it used the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria) in Internal Control - Integrated Framework. Based on our assessment we believe that, as of December 31, 2011, the Company's internal control over financial reporting is effective.

The effectiveness of our internal control over financial reporting as of December 31, 2011 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report.

/s/ RICHARD J. HIPPLE
Richard J. Hipple
Chairman, President and Chief Executive Officer

/s/ JOHN D. GRAMPA
John D. Grampa
Senior Vice President Finance and
Chief Financial Officer

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of

Materion Corporation

We have audited Materion Corporation and subsidiaries' internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Materion Corporation and subsidiaries' 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 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, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and 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, Materion Corporation and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets as of December 31, 2011 and 2010, and the related consolidated statements of income and loss, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2011 of Materion Corporation and subsidiaries and our report dated February 29, 2012 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Cleveland, Ohio

February 29, 2012

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of

Materion Corporation

We have audited the accompanying consolidated balance sheets of Materion Corporation and subsidiaries as of December 31, 2011 and 2010, and the related consolidated statements of income and loss, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2011. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and 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 financial statements referred to above present fairly, in all material respects, the consolidated financial position of Materion Corporation and subsidiaries at December 31, 2011 and 2010, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2011, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic 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), Materion Corporation and subsidiaries' internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 29, 2012 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Cleveland, Ohio

February 29, 2012

Table of Contents**Materion Corporation and Subsidiaries****Years Ended December 31, 2011, 2010 and 2009****Consolidated Statements of Income and Loss**

(Thousands except per share amounts)	2011	2010	2009
Net sales	\$ 1,526,730	\$ 1,302,314	\$ 715,186
Cost of sales	1,311,409	1,079,666	623,764
Gross margin	215,321	222,648	91,422
Selling, general and administrative expense	131,388	126,477	89,762
Research and development expense	11,081	7,113	6,771
Derivative ineffectiveness		598	4,892
Other net	15,774	14,827	9,482
Operating profit (loss)	57,078	73,633	(19,485)
Interest expense net	2,812	2,665	1,299
Income (loss) before income taxes	54,266	70,968	(20,784)
Income tax expense (benefit)	14,287	24,541	(8,429)
Net income (loss)	\$ 39,979	\$ 46,427	\$ (12,355)
Basic earnings per share:			
Net income (loss) per share of common stock	\$ 1.96	\$ 2.29	\$ (0.61)
Diluted earnings per share:			
Net income (loss) per share of common stock	\$ 1.93	\$ 2.25	\$ (0.61)
Weighted-average number of shares of common stock outstanding			
Basic	20,365	20,282	20,191
Diluted	20,754	20,590	20,191

See Notes to Consolidated Financial Statements.

Table of Contents**Materion Corporation and Subsidiaries****Years Ended December 31, 2011, 2010 and 2009****Consolidated Statements of Cash Flows**

(Thousands)	2011	2010	2009
Cash flows from operating activities:			
Net income (loss)	\$ 39,979	\$ 46,427	\$ (12,355)
Adjustments to reconcile net income (loss) to net cash provided from operating activities:			
Depreciation, depletion and amortization	43,635	35,394	31,939
Amortization of deferred financing costs in interest expense	559	538	430
Stock-based compensation expense	5,000	4,100	3,484
Derivative financial instruments ineffectiveness		598	4,892
Deferred tax (benefit) expense	(1,668)	13,623	(10,065)
Changes in assets and liabilities net of acquired assets and liabilities:			
Decrease (increase) in accounts receivable	26,818	(50,386)	10,045
Decrease (increase) in other receivables	(630)	7,084	(7,678)
Decrease (increase) in inventory	(30,016)	(23,112)	34,162
Decrease (increase) in prepaid and other current assets	(7,571)	(3,566)	(4,606)
Increase (decrease) in accounts payable and accrued expenses	(2,580)	7,002	(754)
Increase (decrease) in unearned revenue	661	1,938	319
Increase (decrease) in interest and taxes payable	(5,891)	2,048	5,456
Increase (decrease) in long-term liabilities	(15,993)	(8,736)	(16,422)
Other net	4,503	(1,911)	2,796
Net cash provided from operating activities	56,806	31,041	41,643
Cash flows from investing activities:			
Payments for purchase of property, plant and equipment	(28,187)	(42,314)	(44,173)
Payments for mine development	(560)	(11,348)	(808)
Reimbursement for capital spending under government contract	5,386	21,944	28,200
Payments for purchase of business less cash received	(22,448)	(20,605)	(54,107)
Proceeds from transfer of acquired inventory to consignment line		5,667	
Proceeds from sale of property, plant and equipment	54	77	3
Other investments net	(4,274)	60	75
Net cash (used in) investing activities	(50,029)	(46,519)	(70,810)
Cash flows from financing activities:			
Proceeds from issuance (repayment) of short-term debt	(6,950)	(8,406)	25,778
Proceeds from issuance of long-term debt	118,582	80,000	25,700
Repayment of long-term debt	(116,425)	(50,000)	(28,600)
Principal payments under capital lease obligations	(812)	(779)	(185)
Deferred financing costs	(2,637)	(220)	(126)
Repurchase of common stock	(3,776)	(3,527)	
Issuance of common stock under stock option plans	735	2,631	497
Tax benefit from stock compensation realization	658	121	53
Net cash provided from (used in) financing activities	(10,625)	19,820	23,117
Effects of exchange rate changes on cash and cash equivalents	(1)	(491)	(243)
Net change in cash and cash equivalents	(3,849)	3,851	(6,293)
Cash and cash equivalents at beginning of year	16,104	12,253	18,546
Cash and cash equivalents at end of year	\$ 12,255	\$ 16,104	\$ 12,253

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See Notes to Consolidated Financial Statements.

Table of Contents**Materion Corporation and Subsidiaries****December 31, 2011 and 2010****Consolidated Balance Sheets**

(Thousands)	2011	2010
Assets		
Current assets		
Cash and cash equivalents	\$ 12,255	\$ 16,104
Accounts receivable (net of allowance of \$1,490 for 2011 and \$1,452 for 2010)	117,761	139,374
Other receivables	4,602	3,972
Inventories	187,176	154,467
Prepaid expenses	39,739	31,743
Deferred income taxes	9,368	10,065
Total current assets	370,901	355,725
Related-party notes receivable	73	90
Long-term deferred income taxes	11,627	2,042
Property, plant and equipment	753,326	719,953
Less allowances for depreciation, amortization and depletion	(489,513)	(454,085)
Property, plant, and equipment net	263,813	265,868
Intangible assets	34,580	36,849
Other assets	7,073	1,900
Goodwill	84,036	72,936
Total Assets	\$ 772,103	\$ 735,410
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt	\$ 40,944	\$ 47,835
Accounts payable	39,385	33,375
Salaries and wages	29,441	34,035
Taxes other than income taxes	975	905
Other liabilities and accrued items	25,893	24,911
Unearned revenue	3,033	2,378
Income taxes		3,921
Total current liabilities	139,671	147,360
Other long-term liabilities	16,488	17,915
Retirement and post-employment benefits	105,115	82,502
Unearned income	62,540	57,154
Long-term income taxes	1,793	2,906
Deferred income taxes	51	4,912
Long-term debt	40,463	38,305
Shareholders' equity		
Serial preferred stock, no par value; 5,000 authorized shares, none issued		
Common stock, no par value 60,000 authorized shares; issued shares of 27,024 in 2011 and 26,968 in 2010	185,913	180,161
Retained earnings	408,380	368,401
Common stock in treasury; 6,716 shares in 2011 and 6,648 shares in 2010	(118,279)	(115,090)
Other comprehensive income (loss)	(72,215)	(51,616)
Other equity transactions	2,183	2,500

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Total shareholders' equity	405,982	384,356
Total Liabilities and Shareholders' Equity	\$ 772,103	\$ 735,410

See Notes to Consolidated Financial Statements.

Table of Contents**Materion Corporation and Subsidiaries****Years Ended December 31, 2011, 2010 and 2009****Consolidated Statements of Shareholders' Equity**

(Thousands)	Common Stock	Retained Earnings	Common Stock In Treasury	Other Comprehensive Income (Loss)	Other Equity Transactions	Total
Balances at January 1, 2009	\$ 170,597	\$ 334,329	\$ (110,865)	\$ (47,801)	\$ 837	\$ 347,097
Net loss		(12,355)				(12,355)
Foreign currency translation adjustment				(22)		(22)
Derivative and hedging activity, net of taxes of \$446				825		825
Pension and post-employment benefit adjustment, net of tax benefit of \$92				314		314
Comprehensive loss						(11,238)
Proceeds from exercise of 32 shares under option plans	497					497
Income tax benefit from stock compensation realization	53					53
Stock-based compensation expense	3,484					3,484
Shares withheld for employee taxes on equity awards	(482)					(482)
Directors' deferred compensation	(13)		(505)		1,326	808
Other equity transactions	(360)					(360)
Balances at December 31, 2009	173,776	321,974	(111,370)	(46,684)	2,163	339,859
Net income		46,427				46,427
Foreign currency translation adjustment				1,665		1,665
Derivative and hedging activity, net of taxes of \$581				(1,078)		(1,078)
Pension and post-employment benefit adjustment, net of tax benefit of \$3,120				(5,519)		(5,519)
Comprehensive income						41,495
Proceeds from exercise of 154 shares under option plans	2,631					2,631
Income tax benefit from stock compensation realization	120					120
Repurchase of 150 shares			(3,527)			(3,527)
Stock-based compensation expense	4,100					4,100
Shares withheld for employee taxes on equity awards	(481)					(481)
Directors' deferred compensation			(192)		337	145
Other equity transactions	15		(1)			14
Balances at December 31, 2010	180,161	368,401	(115,090)	(51,616)	2,500	384,356
Net income		39,979				39,979
Foreign currency translation adjustment				958		958
Derivative and hedging activity, net of taxes of \$1,047				1,946		1,946
Pension and post-employment benefit adjustment, net of tax benefit of \$12,292				(23,503)		(23,503)
Comprehensive income						19,380
Proceeds from exercise of 53 shares under option plans	735					735
Income tax benefit from stock compensation realization	658					658
Repurchase of 132 shares			(3,776)			(3,776)
Stock-based compensation expense	5,000					5,000
Shares withheld for employee taxes on equity awards	(641)					(641)
Directors' deferred compensation			587		(317)	270
Balances at December 31, 2011	\$ 185,913	\$ 408,380	\$ (118,279)	\$ (72,215)	\$ 2,183	\$ 405,982

See Notes to Consolidated Financial Statements.

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Materion Corporation and Subsidiaries

Notes to Consolidated Financial Statements

Note A Significant Accounting Policies

Organization: The Company amended its articles of incorporation to change its name from Brush Engineered Materials Inc. to Materion Corporation effective March 8, 2011. Concurrent with the name change, the Company's New York Stock Exchange ticker symbol was changed from BW to MTRN.

The Company is a holding company with subsidiaries that have operations in the United States, Europe and Asia. These operations manufacture advanced engineered materials used in a variety of markets, including consumer electronics, industrial components and commercial aerospace, defense and science, energy, medical, automotive electronics, telecommunications infrastructure and appliance. The Company has four reportable segments:

Advanced Material Technologies manufactures precious and non-precious vapor deposition targets, frame lid assemblies, advanced chemicals, performance coatings, optics, microelectronic packages, other precious and non-precious metal products and specialty inorganic materials;

Performance Alloys manufactures high precision strip and bulk products from copper and nickel-based alloys;

Beryllium and Composites produces beryllium metal, beryllium composites and beryllia ceramics in a variety of forms; and

Technical Materials manufactures clad inlay and overlay metals, precious and base metal electroplated systems and other related products.

See Note M to the Consolidated Financial Statements for additional segment details. The Company is vertically integrated and distributes its products through a combination of company-owned facilities and independent distributors and agents.

Use of Estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results may differ from those estimates.

Consolidation: The Consolidated Financial Statements include the accounts of Materion Corporation and its subsidiaries. All of the Company's subsidiaries are wholly owned as of December 31, 2011. Intercompany accounts and transactions are eliminated in consolidation.

Cash Equivalents: All highly liquid investments with a maturity of three months or less when purchased are considered to be cash equivalents.

Accounts Receivable: An allowance for doubtful accounts is maintained for the estimated losses resulting from the inability of customers to pay the amounts due. The allowance is based upon identified delinquent accounts, customer payment patterns and other analyses of historical data and trends. The Company extends credit to customers based upon their financial condition and generally collateral is not required.

Inventories: Inventories are stated at the lower of cost or market. The cost of the majority of domestic inventories is determined using the last-in, first-out (LIFO) method. The remaining inventories are stated principally at average cost.

Property, Plant and Equipment: Property, plant and equipment is stated on the basis of cost. Depreciation is computed principally by the straight-line method, except certain assets for which depreciation is computed by

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the units-of-production or the sum-of-the-years-digit method. The depreciable lives that are used in computing the annual provision for depreciation by class of asset are as follows:

	Years
Land improvements	5 to 25
Buildings	10 to 40
Leasehold improvements	Life of lease
Machinery and equipment	3 to 15
Furniture and fixtures	4 to 15
Automobiles and trucks	2 to 8
Research equipment	6 to 12
Computer hardware	3 to 10
Computer software	3 to 10

An asset acquired under a capital lease will be recorded at the lesser of the present value of the projected lease payments or the fair value of the asset and will be depreciated in accordance with the above schedule. Leasehold improvements will be depreciated over the life of the improvement if it is shorter than the life of the lease. Repair and maintenance costs are expensed as incurred.

Mineral Resources and Mine Development: Property acquisition costs are capitalized as mineral resources on the balance sheet and are depleted using the units-of-production method based upon recoverable proven reserves. Overburden, or waste rock, is removed prior to the extraction of the ore from a particular open pit. The removal cost is capitalized and amortized as the ore is extracted using the units-of-production method based upon the proven reserves in that particular pit. Exploration and development expenses, including development drilling, are charged to expense in the period in which they are incurred.

Goodwill and Other Intangible Assets: Goodwill is not amortized, but instead reviewed annually as of December 31 of each year, or more frequently under certain circumstances, for impairment. Goodwill is assigned to the reporting unit, which is the operating segment level or one level below the operating segment. Intangible assets with finite lives are amortized using the straight-line method or effective interest method, as applicable, over the periods estimated to be benefited, which is generally twenty years or less. Finite-lived intangible assets are also reviewed for impairment if facts and circumstances warrant.

Asset Impairment: In the event that facts and circumstances indicate that the carrying value of long-lived and finite-lived intangible assets may be impaired, an evaluation of recoverability is performed by comparing the carrying value of the assets to the associated estimated future undiscounted cash flow. If the carrying value exceeds that cash flow, then the assets are written down to their fair values.

Derivatives: The Company recognizes all derivatives on the balance sheet at their fair values. If the derivative is designated and effective as a hedge, depending upon the nature of the hedge, changes in the fair value of the derivative are either offset against the change in fair value of the hedged asset, liability or firm commitment through earnings or recognized in other comprehensive income (loss), a component of shareholders equity, until the hedged item is recognized in earnings. The ineffective portion of a derivative's change in fair value, if any, is recognized in earnings immediately. If a derivative is not a hedge, changes in its fair value are adjusted through income.

Asset Retirement Obligation: The Company records a liability to recognize the legal obligation to remove an asset at the time the asset is acquired or when the legal liability arises. The liability is recorded for the present value of the ultimate obligation by discounting the estimated future cash flows using a credit-adjusted risk-free interest rate. The liability is accreted over time, with the accretion charged to expense. An asset equal to the fair value of the liability is recorded concurrent with the liability and depreciated over the life of the underlying asset.

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Unearned Income: Expenditures for capital equipment to be reimbursed under government contracts are recorded in construction in progress while the reimbursements for those expenditures are recorded in unearned income, a liability on the balance sheet. When the assets are placed in service, their total cost will be depreciated over their useful lives and the unearned income liability will be reduced and credited to income ratably with the annual depreciation expense.

Revenue Recognition: The Company generally recognizes revenue when the goods are shipped and title passes to the customer. The Company requires persuasive evidence that a revenue arrangement exists, delivery of the product has occurred, the selling price is fixed or determinable and collectibility is reasonably assured before revenue is realized and earned. Billings in advance of the shipment of the goods are recorded as unearned revenue, which is a liability on the balance sheet. Revenue is recognized for these transactions when the goods are shipped and all other revenue recognition criteria are met.

Shipping and Handling Costs: The Company records shipping and handling costs for products sold to customers in cost of sales on the Consolidated Statements of Income and Loss.

Advertising Costs: The Company expenses all advertising costs as incurred. Advertising costs were \$3.1 million in 2011, \$1.1 million in 2010 and \$0.7 million in 2009.

Stock-based Compensation: All stock-based compensation instruments, including options, stock appreciation rights, restricted stock and performance restricted stock, are viewed collectively when determining the accounting treatment of the tax considerations upon the realization of the benefit by the recipient.

Income Taxes: The Company uses the liability method in measuring the provision for income taxes and recognizing deferred tax assets and liabilities on the balance sheet. The Company will record a valuation allowance to reduce the deferred tax assets to the amount that is more likely than not to be realized, as warranted by the facts and circumstances. The Company applies a more-likely-than-not recognition threshold for all tax uncertainties and will record a liability for those tax benefits that have a less than 50% likelihood of being sustained upon examination by the taxing authorities.

Net Income Per Share: Basic earnings per share (EPS) is computed by dividing income available to common stockholders by the weighted-average number of common shares outstanding for the period. Diluted EPS reflects the assumed conversion of all dilutive common stock equivalents as appropriate under the treasury stock method.

Reclassification: Certain amounts in prior years have been reclassified to conform to the 2011 consolidated financial statement presentation.

New Pronouncements: In 2011, the Financial Accounting Standards Board (FASB) issued two Accounting Standards Updates (ASU) which amend guidance for the presentation of comprehensive income. The amended guidance requires an entity to present components of net income and other comprehensive income in one continuous statement, referred to as the statement of comprehensive income, or in two separate, but consecutive statements. The current option to report other comprehensive income and its components in the statement of stockholders' equity will be eliminated. Although the new guidance changes the presentation of comprehensive income, there are no changes to the components that are recognized in net income or other comprehensive income under existing guidance. The ASU is effective for interim and annual periods beginning after December 15, 2011 and retrospective application is required. These ASUs will change the financial statement presentation of comprehensive income but will not impact net income, financial position or cash flows.

In 2011, the FASB issued an ASU which intended to reduce complexity and costs by allowing an entity the option to make a qualitative evaluation about the likelihood of goodwill impairment to determine whether it should calculate the fair value of a reporting unit. The ASU also expands upon the examples of events and

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circumstances that an entity should consider between annual impairment tests in determining whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. The ASU is effective for periods beginning on or after December 15, 2011. The Company adopted this ASU early, as permitted, in its evaluation of goodwill as of December 31, 2011.

The FASB issued an ASU in October 2009 that provides amendments to the criteria for separating consideration in multiple-deliverable arrangements. This update allows companies to allocate consideration received for qualified separate deliverables using estimated selling price for both delivered and undelivered items when vendor-specific objective evidence or third-party evidence is unavailable. Additional disclosures discussing the nature of multiple element arrangements, the types of deliverables under the arrangements, the general timing of their delivery, and significant factors and estimates used to determine estimated selling prices are required. The Company adopted this update effective January 1, 2011 for new revenue arrangements entered into or materially modified on or after January 1, 2011. The adoption of the provisions of this update did not have a material impact on the Consolidated Financial Statements.

The FASB issued ASU in December 2010 which requires public entities that present comparative financial statements to disclose revenue and earnings of the combined entity as though the business combinations that occurred during the current year had occurred at the beginning of the comparable prior annual reporting period only. The ASU also expanded the supplemental pro forma disclosures to include a description of the nature and amount of material, nonrecurring pro forma adjustments directly attributable to the business combination included in the reported pro forma revenue and earnings. The ASU is effective for business combinations for which the acquisition date is on or after the January 1, 2011. The adoption of this statement did not have a significant impact on the Consolidated Financial Statements.

Note B Acquisitions

In October 2011, the Company acquired the outstanding stock of EIS Optics Limited for \$23.9 million in cash. EIS manufactures optical thin film filters, glass processing, lithography and optical subassemblies that allow for the precision management of light in a broad range of end-use applications throughout the projection display, entertainment lighting, sensors, medical instruments and gaming industries. EIS employs approximately 350 people at its 101,000 square foot manufacturing facility in Shanghai, China. The purchase price included amounts to be held in escrow pending the resolution of various matters as detailed in the purchase agreement. Preliminary goodwill assigned to the transaction totaled \$11.1 million.

Sales from EIS subsequent to the acquisition were \$4.0 million. The pro forma impact of EIS' operating results on the Company's sales, income before income taxes and net income for 2010 and the full year of 2011 was immaterial.

In January 2010, the Company acquired the outstanding stock of Academy Corporation in Albuquerque, New Mexico for \$21.0 million in cash. Academy provides precious and non-precious metals and refining services for a variety of applications, including architectural glass, solar energy, medical and electronics. Major product forms include sputtering targets, sheet, fine wire, rod and powder. Academy employs approximately 150 people at its four leased facilities.

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A condensed balance sheet depicting the amounts assigned to the acquired assets and liabilities as of the acquisition date is as follows:

(Thousands)	Asset (Liability)
Cash	\$ 380
Current assets	4,564
Precious metal inventory	5,667
Finite-lived intangible assets	3,253
Property, plant and equipment	8,533
Other assets	10
Goodwill	5,431
Current liabilities	(4,575)
Deferred income taxes	(2,278)
 Total purchase	 \$ 20,985

The Company financed the acquisition with a combination of cash on hand and borrowings under the revolving credit agreement. The \$21.0 million purchase price was net of \$1.7 million the Company received back from the seller in the second quarter 2010 as a result of the resolution of working capital valuation adjustments in accordance with the purchase agreement. Additional funds remain in escrow pending finalization of various other matters as detailed in the purchase agreement. Immediately after the purchase, the Company transferred Academy's precious metal inventory to a financial institution for its fair value of \$5.7 million and consigned it back under the existing consignment lines.

In October 2009, the Company acquired all of the capital stock of Barr Associates, Inc. for \$55.2 million in cash. Barr, based in Westford, Massachusetts, manufactures thin film optical filters used in a variety of applications, including defense, aerospace, medical, telecommunications, lighting and astronomy.

A condensed balance sheet depicting the amounts assigned to the acquired assets and liabilities as of the acquisition date is as follows:

(Thousands)	Asset (Liability)
Cash	\$ 1,058
Other current assets	13,206
Finite-lived intangible assets	12,200
Property, plant and equipment	7,269
Other assets	54
Goodwill	31,727
Current liabilities	(3,360)
Long-term liabilities	(2,974)
Deferred income taxes	(4,015)
 Total purchase	 \$ 55,165

The purchase price was financed with a combination of cash on hand and borrowings under the revolving credit agreement. The purchase price included amounts to be held in escrow pending the resolution of various matters as detailed in the purchase agreement. In addition to the initial cash considerations, the purchase agreement allows for a potential earn out to be paid to the sellers based upon the future performance of the operation. The earn out was initially recorded in other long-term liabilities at its fair value of \$1.9 million as of December 31, 2009. Based upon actual and revised projected performance and the use of a discounted cash flow analysis, the fair value of the earn out liability was reduced to \$1.1 million as of December 31, 2010 and further reduced to zero as of December 31, 2011.

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The results of the above acquired businesses were included in the Company's financial statements since their respective acquisition dates. The acquisitions are included in the Advanced Material Technologies segment. See Note E to the Consolidated Financial Statements for additional information on the intangible assets associated with these acquisitions.

Note C Inventories

Inventories on the Consolidated Balance Sheets are summarized as follows:

(Thousands)	December 31,	
	2011	2010
Principally average cost:		
Raw materials and supplies	\$ 42,969	\$ 43,295
Work in process	179,445	159,081
Finished goods	57,645	32,991
Gross inventories	280,059	235,367
Excess of average cost over LIFO inventory value	92,883	80,900
Net inventories	\$ 187,176	\$ 154,467

Average cost approximates current cost. Gross inventories accounted for using the LIFO method totaled \$183.7 million at December 31, 2011 and \$153.6 million at December 31, 2010. The liquidation of LIFO inventory layers reduced cost of sales by \$0.2 million in 2011 and \$4.4 million in 2010.

Lower of cost or market charges reduced net inventories by \$0.4 million in 2010.

Note D Property, Plant and Equipment

Property, plant and equipment on the Consolidated Balance Sheets is summarized as follows:

(Thousands)	December 31,	
	2011	2010
Land	\$ 9,123	\$ 8,991
Buildings	114,090	110,344
Machinery and equipment	486,193	469,307
Software	29,277	28,261
Construction in progress	86,149	75,282
Allowances for depreciation	(476,628)	(450,853)
Subtotal	248,204	241,332
Capital leases	10,898	10,732
Allowances for amortization	(837)	(260)
Subtotal	10,061	10,472
Mineral resources	5,029	5,029
Mine development	12,567	12,007
Allowances for amortization and depletion	(12,048)	(2,972)
Subtotal	5,548	14,064
Property, plant and equipment net	\$ 263,813	\$ 265,868

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Depreciation expense, including amortization for assets recorded under capital lease, was \$37.6 million in 2011, \$29.0 million in 2010 and \$27.9 million in 2009.

Table of Contents**Note E Intangible Assets****Assets Acquired**

The Company acquired the following intangible assets in 2011:

(Dollars in thousands)	Amount	Weighted-average Amortization Period
Customer relationships	\$ 740	7.0 years
License	760	5.0 years
Technology	160	5.0 years
Non-compete agreement	50	2.0 years
Deferred financing costs	2,637	5.7 years
 Total assets subject to amortization	 \$ 4,347	 5.9 years
 Goodwill	 \$ 11,100	 Not Applicable

The customer relationships, license, technology, non-compete agreement and goodwill were acquired as part of the fourth quarter 2011 purchase of the capital stock of EIS Optics Limited.

The deferred financing costs were incurred for the refinance of the company's revolving credit agreement and the agreement with the Toledo and Dayton Port Authorities to issue development revenue bonds.

Table of Contents**Assets Subject to Amortization**

The cost, accumulated amortization and net book value of intangible assets subject to amortization as of December 31, 2011 and 2010 and the amortization expense for each year then ended is as follows:

(Thousands)	2011	2010
Deferred financing costs		
Cost	\$ 6,427	\$ 3,789
Accumulated amortization	(3,399)	(2,840)
Net book value	3,028	949
Customer relationships		
Cost	38,170	37,430
Accumulated amortization	(14,684)	(10,691)
Net book value	23,486	26,739
Technology		
Cost	11,280	11,120
Accumulated amortization	(4,889)	(3,454)
Net book value	6,391	7,666
License		
Cost	2,480	1,720
Accumulated amortization	(850)	(467)
Net book value	1,630	1,253
Non-compete contracts		
Cost	550	500
Accumulated amortization	(505)	(500)
Net book value	45	
Trade Name		
Cost	973	973
Accumulated amortization	(973)	(731)
Net book value		242
Total		
Cost	\$ 59,880	\$ 55,532
Accumulated amortization	(25,300)	(18,683)
Net book value	\$ 34,580	\$ 36,849
Aggregate amortization expense	\$ 6,618	\$ 6,931

The aggregate amortization expense is estimated to be \$6.5 million in 2012, \$5.9 million in 2013, \$5.6 million in 2014, \$5.5 million in 2015 and \$4.6 million in 2016.

Assets Not Subject to Amortization

The Company's only intangible asset not subject to amortization is goodwill. A reconciliation of the goodwill activity for 2011 and 2010 is as follows:

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(Thousands)	2011	2010
Balance at the beginning of the year.	\$ 72,936	\$ 67,034
Current year additions.	11,100	5,705
Adjustment to deferred taxes on prior year acquisition		197
Balance at the end of the year	\$ 84,036	\$ 72,936

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All of the goodwill has been assigned to the Advanced Material Technologies segment.

The goodwill acquired in 2011 and 2010 was not deductible for tax purposes.

Note F Debt

Long-term debt on the Consolidated Balance Sheets is summarized as follows:

(Thousands)	December 31,	
	2011	2010
Revolving credit agreement	\$ 25,000	\$ 30,000
Fixed rate industrial development revenue bonds payable in annual installments through 2021	7,705	
Variable rate industrial development revenue bonds payable in 2016	8,305	8,305
Total outstanding	41,010	38,305
Current portion of long-term debt	(547)	
Total	\$ 40,463	\$ 38,305

Maturities on long-term debt instruments as of December 31, 2011 are as follows:

2012	\$ 547
2013	583
2014	613
2015	653
2016	33,998
Thereafter	4,616
Total	\$ 41,010

In July 2011, the Company entered into an Amended and Restated Credit Agreement with six financial institutions that expires in 2016 and provides for a \$325.0 million revolving credit facility comprised of sub-facilities for revolving loans, swing line loans, letters of credit and foreign borrowings. The credit agreement also provides for an uncommitted incremental facility whereby, under certain conditions, the Company may be able to borrow additional term loans in an aggregate not to exceed \$100.0 million. The Company's previous revolving credit facility had a limit of \$240.0 million and provided for an uncommitted incremental facility not to exceed \$50.0 million. At December 31, 2011, the maximum availability under this facility was \$260.0 million. The credit agreement is secured by substantially all of the assets of the Company and its direct subsidiaries, with the exception of non-mining real property and certain other assets. The credit agreement allows the Company to borrow money at a premium over LIBOR or prime rate and at varying maturities. The premium resets quarterly according to the terms and conditions available under the agreement. At December 31, 2011 there was \$37.3 million outstanding against the letters of credit sub-facility. The Company pays a variable commitment fee that resets quarterly (0.225% as of December 31, 2011) of the available and unborrowed amounts under the revolving credit line.

The credit agreement is subject to restrictive covenants including incurring additional indebtedness, acquisition limits, dividend declarations and stock repurchases. In addition, the agreement requires the Company to maintain a maximum leverage ratio and a minimum fixed charge coverage ratio. The Company was in compliance with all of its debt covenants as of December 31, 2011.

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The following table summarizes the Company's short-term lines of credit. Amounts shown as outstanding are included in short-term debt on the Consolidated Balance Sheets.

(Thousands)	December 31, 2011			December 31, 2010		
	Total	Outstanding	Available	Total	Outstanding	Available
Domestic	\$ 262,724	\$ 3,200	\$ 259,524	\$ 173,068	\$ 11,080	\$ 161,988
Foreign	16,149	770	15,379	14,327	3,313	11,014
Precious metal	36,427	36,427		33,442	33,442	
Total	\$ 315,300	\$ 40,397	\$ 274,903	\$ 220,837	\$ 47,835	\$ 173,002

The domestic line is committed and includes all sub-facilities in the \$325.0 million maximum borrowing under the revolving credit agreement. The Company has various foreign lines of credit, one of which for 3.5 million euros is committed and secured. The remaining foreign lines are uncommitted, unsecured and renewed annually. The average interest rate on short-term debt was 2.94 % and 3.06% as of December 31, 2011 and 2010, respectively.

In April 2011, the Company entered into an agreement with the Toledo-Lucas County Port Authority and the Dayton Montgomery County Port Authority to co-issue \$8.0 million in taxable development revenue bonds, with a fixed amortization term that will mature in 2021.

The interest rate on these bonds is fixed at 4.9% and the unamortized balance of the bonds was \$7.7 million at December 31, 2011.

In November 1996, the Company entered into an agreement with the Lorain Port Authority, Ohio to issue \$8.3 million in variable rate industrial revenue bonds, maturing in 2016. The variable rate ranged from 0.20% to 0.50% in 2011 and from 0.33% to 0.50% in 2010.

Note G Leasing Arrangements

The Company leases warehouse and manufacturing space, and manufacturing, computer and other office equipment under operating leases with terms ranging up to 25 years. Operating lease expense amounted to \$8.9 million, \$9.9 million and \$8.4 million, during 2011, 2010 and 2009, respectively. The Company also leases manufacturing space and computer equipment under capital lease agreements of varying terms.

The future estimated minimum payments under capital leases and non-cancelable operating leases with initial lease terms in excess of one year at December 31, 2011, are as follows:

(Thousands)	Capital Leases	Operating Leases
2012	\$ 1,226	\$ 7,177
2013	1,095	6,047
2014	1,066	4,290
2015	1,064	3,702
2016	1,064	3,413
2017 and thereafter	6,830	14,147
Total minimum lease payments	12,345	\$ 38,776
Amounts representing interest	3,083	
Present value of net minimum lease payments	\$ 9,262	

Certain lease agreements may be subject to restrictive covenants, including leverage, fixed charges and annual capital expenditures.

Table of Contents**Note H Fair Value Information and Derivative Financial Instruments**

The Company measures and records financial instruments at their fair value. A hierarchy is used for those instruments measured at fair value that distinguishes between assumptions based upon market data (observable inputs) and the Company's assumptions (unobservable inputs). The hierarchy consists of three levels:

Level 1 Quoted market prices in active markets for identical assets and liabilities;

Level 2 Inputs other than Level 1 inputs that are either directly or indirectly observable; and

Level 3 Other significant unobservable inputs developed using estimates and assumptions developed by the Company, which reflect those that a market participant would use.

The following table summarizes the financial instruments measured at fair value in the Consolidated Balance Sheet as of December 31, 2011:

(Thousands)	Total	Fair Value Measurements		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Other Significant Unobservable Inputs (Level 3)
Financial Assets				
Directors' deferred compensation investments	\$ 635	\$ 635	\$	\$
Precious metal forward contracts	249		249	
Foreign currency forward contracts	1,879		1,879	
Total	\$ 2,763	\$ 635	\$ 2,128	\$
Financial Liabilities				
Directors' deferred compensation liability	\$ 635	\$ 635	\$	\$
Precious metal swaps	198		198	
Foreign currency forward contracts	480		480	
Total	\$ 1,313	\$ 635	\$ 678	\$

The Company uses a market approach to value the assets and liabilities for outstanding derivative contracts in the table above. Foreign currency and precious metal hedge contracts are valued through models that utilize market observable inputs including both spot and forward prices for the same underlying currencies and metals. The carrying values of the other working capital items and debt on the Consolidated Balance Sheet approximate their fair values as of December 31, 2011.

The Company uses derivative contracts to hedge portions of its foreign currency exposures and may also use derivatives to hedge a portion of its precious metal exposures. The objectives and strategies for using derivatives in these areas are as follows:

Foreign Currency. The Company sells products to overseas customers in their local currencies, primarily the euro and yen. The Company secures foreign currency derivatives, mainly forward contracts and options, to hedge these anticipated sales transactions. The purpose of the hedge program is to protect against the reduction in the dollar value of foreign currency sales from adverse exchange rate movements. Should the dollar strengthen significantly, the decrease in the translated value of the foreign currency sales should be partially offset by gains on the hedge contracts. Depending upon the methods used, the hedge contract may limit the benefits from a weakening U.S. dollar.

The use of forward contracts locks in a firm rate and eliminates any downside from an adverse rate movement as well as any benefit from a favorable rate movement. The Company may from time to time choose to hedge with options or a tandem of options known as a collar. These

hedging techniques

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can limit or eliminate the downside risk but can allow for some or all of the benefit from a favorable rate movement to be realized. Unlike a forward contract, a premium is paid for an option; collars, which are a combination of a put and call option, may have a net premium but they can be structured to be cash neutral. The Company will primarily hedge with forward contracts due to the relationship between the cash outlay and the level of risk.

Precious Metals. The Company maintains the majority of its precious metal production requirements on consignment in order to reduce its working capital investment and the exposure to metal price movements. When a precious metal product is fabricated and ready for shipment to the customer, the metal is purchased out of consignment at the current market price. The price paid by the Company forms the basis for the price charged to the customer. This methodology allows for changes in either direction in the market prices of the precious metals used by the Company to be passed through to the customer and reduces the impact changes in prices could have on the Company's margins and operating profit. The consigned metal is owned by financial institutions who charge the Company a financing fee based upon the current value of the metal on hand.

In certain instances, a customer may want to establish the price for the precious metal at the time the sales order is placed rather than at the time of shipment. Setting the sales price at a different date than when the material would be purchased potentially creates an exposure to movements in the market price of the metal. Therefore, in these limited situations, the Company may elect to enter into a forward contract to purchase precious metal. The forward contract allows the Company to purchase metal at a fixed price on a specific future date. The price in the forward contract serves as the basis for the price to be charged to the customer. By so doing, the selling price and purchase price are matched and the Company's price exposure is reduced.

The Company refines precious metal containing materials for its customers and typically will purchase the refined metal from the customer at current market prices. In limited circumstances, the customer may want to fix the price to be paid at the time of the order as opposed to when the material is refined. The customer may also want to fix the price for a set period of time. The Company may then elect to enter into a hedge contract, either a forward contract or a swap, to fix the price for the estimated quantity of metal to be purchased thereby reducing the exposure to adverse movements in the price of the metal.

The Company may from time to time elect to purchase precious metal and hold in its inventory rather than on consignment due to potential credit line limitations. These purchases are typically held for a short duration. A forward contract will be secured at the time of the purchase to fix the price to be used when the metal is transferred back to the consignment line, thereby limiting any price exposure during the time when the metal was owned.

A team consisting of senior financial managers reviews the estimated exposure levels, as defined by budgets, forecasts and other internal data, and determines the timing, amounts and instruments to use to hedge that exposure. Management analyzes the effective hedged rates and the actual and projected gains and losses on the hedging transactions against the program objectives, targeted rates and levels of risk assumed. Foreign currency contracts are typically layered in at different times for a specified exposure period in order to minimize the impact of market rate movements.

The use of derivatives is governed by policies adopted by the Board of Directors. The Company will only enter into a derivative contract if there is an underlying identified exposure. Contracts are typically held to maturity. The Company does not engage in derivative trading activities and does not use derivatives for speculative purposes. The Company only uses hedge contracts that are denominated in the same currency or metal as the underlying exposure.

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All derivatives are recorded on the balance sheet at their fair values. If the derivative is designated and effective as a hedge, depending upon the nature of the hedge, changes in the fair value of the derivative are either offset against the change in the fair value of the hedged asset, liability or firm commitment through earnings or recognized in other comprehensive income (OCI), a component of shareholders' equity, until the hedged item is recognized in earnings. The ineffective portion of a derivative's change in fair value, if any, is recognized in earnings immediately. If a derivative is not a hedge, changes in the fair value are adjusted through income immediately.

The following table summarizes the notional amount and the fair value of the Company's outstanding derivatives as of December 31, 2011 and 2010:

(Thousands)	December 31, 2011		December 31, 2010	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Asset (liability)				
Foreign currency forward contracts				
Yen	\$ 12,096	\$ (480)	\$ 19,319	\$ (880)
Euro	26,466	1,879	26,578	(663)
Total	\$ 38,562	\$ 1,399	\$ 45,897	\$ (1,543)
Precious metal contracts				
Forward contracts	\$ 8,795	\$ 249	\$	\$
Swaps	6,964	(198)		
Total	\$ 15,759	\$ 51	\$	\$

The fair values of the outstanding derivatives are recorded as assets (if the derivatives are in a gain position) or liabilities (if the derivatives are in a loss position). The fair values will also be classified as short term or long term depending upon their maturity dates. The balance sheet classification of the outstanding derivatives at December 31, 2011 and 2010 was as follows:

(Thousands)	December 31,	
	2011	2010
Asset (liability)		
Prepaid expenses	\$ 2,128	\$
Other liabilities and accrued items	(678)	(1,536)
Other long-term liabilities		(7)
Total	\$ 1,450	\$ (1,543)

All of the foreign currency derivatives secured in 2011 and 2010 and the precious metal derivatives that were outstanding as of December 31, 2011 were designated as cash flow hedges. Changes in the fair values of these derivatives are recorded in OCI and charged or credited to income when the contracts mature and the underlying hedge transactions occur.

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A summary of the hedging relationships of the outstanding derivative financial instruments designated as cash flow hedges as of December 31, 2011 and 2010 and the pre-tax amounts transferred into income for the twelve months then ended follows.

(Thousands)	Effective Portion of Hedge			Ineffective Portion of Hedge	
	Recognized in OCI at End of Period	Reclassified from OCI into Income During Period Location	Amount	Recognized in Income on Derivative During Period Location	Amount
Gain (loss)					
2011					
Foreign currency forward contracts	\$ 1,399	Other-net	\$ (2,809)	Other-net	\$
Precious metal contracts	51	Cost of sales		Cost of sales	
Total	\$ 1,450		\$ (2,809)		\$
2010					
Foreign currency forward contracts	\$ (1,543)	Other-net	\$ 502	Other-net	\$
Total	\$ (1,543)		\$ 502		\$

The Company secured a debt obligation with an embedded copper derivative in 2009. This derivative provided an economic hedge for the Company's copper inventory against movements in the market price of copper. However, the derivative did not qualify as a hedge for accounting purposes and changes in its fair value were charged against income in the current period. In 2010, the Company secured copper forward contracts that were designed to offset changes in the fair value of the embedded derivative and therefore limit the potential charges against income. The Company recorded losses of \$0.6 million in 2010 and \$4.9 million in 2009 due to changes in the fair values of these derivative financial instruments as derivative ineffectiveness on the Consolidated Statements of Income and Loss. The debt obligation and the embedded derivative as well as the copper forward contracts matured in 2010.

Total derivative ineffectiveness expense was zero in 2011, \$0.6 million in 2010 and \$4.9 million in 2009.

In addition to the precious metal contracts that were outstanding at December 31, 2011, during 2011 and 2010, the Company secured various forward contracts to sell specified quantities of gold. The contracts served as economic hedges of gold purchased and held in inventory for use in manufacturing products for sale in the normal course of business. No hedge designations were assigned to the contracts since they typically matured in the same quarter as they were initially secured. The recognized loss upon maturity of these contracts totaled \$1.2 million in 2011 while a gain of \$0.1 million was recognized upon maturity of these contracts in 2010. The gains and losses were recorded in cost of sales on the Consolidated Statements of Income and Loss. Equal and offsetting gains and losses were recorded in cost of sales in those same periods as a result of the sale of the underlying gold inventory.

The Company expects to relieve the entire balance in OCI as of December 31, 2011 and credit other-net and cost of sales on the Consolidated Statement of Income and Loss in 2012.

Table of Contents**Note I Pensions and Other Post-retirement Benefits**

The obligation and funded status of the Company's pension and other post-retirement benefit plans are shown below. The Pension Benefits column aggregates defined benefit pension plans in the U.S., Germany and England and the U.S. supplemental retirement plans. The Other Benefits column includes the U.S. retiree medical and life insurance plan.

(Thousands)	Pension Benefits		Other Benefits	
	2011	2010	2011	2010
Change in benefit obligation				
Benefit obligation at beginning of year	\$ 180,673	\$ 160,029	\$ 32,374	\$ 30,886
Service cost	6,955	5,135	284	273
Interest cost	9,786	9,156	1,596	1,738
Plan amendments	430	738		
Actuarial (gain) loss	21,280	13,317	1,419	1,774
Benefit payments from fund	(7,512)	(6,478)		
Benefit payments directly by Company	(127)	(96)	(2,735)	(2,661)
Expenses paid from assets	(479)	(497)		
Medicare Part D subsidy			271	364
Foreign currency exchange rate changes	(10)	(631)		
Benefit obligation at end of year	210,996	180,673	33,209	32,374
Change in plan assets				
Fair value of plan assets at beginning of year	131,761	109,729		
Actual return on plan assets gain (loss)	(5,215)	15,367		
Employer contributions	21,706	13,774		
Benefit payments from fund	(7,512)	(6,478)		
Expenses paid from assets	(479)	(497)		
Foreign currency exchange rate changes	83	(134)		
Fair value of plan assets at end of year	140,344	131,761		
Funded status at end of year	\$ (70,652)	\$ (48,912)	\$ (33,209)	\$ (32,374)
Amounts recognized in the Consolidated				
Balance Sheets consist of:				
Other liabilities and accrued items	\$	\$	\$ (2,788)	\$ (2,863)
Retirement and post-employment benefits	(70,652)	(48,912)	(30,421)	(29,511)
	\$ (70,652)	\$ (48,912)	\$ (33,209)	\$ (32,374)
Amounts recognized in other comprehensive income (before tax) consist of:				
Net actuarial (gain) loss	\$ 106,583	\$ 73,008	\$ 978	\$ (441)
Net prior service (credit) cost	(2,527)	(3,292)	202	166
	\$ 104,056	\$ 69,716	\$ 1,180	\$ (275)
Amortizations expected to be recognized during next fiscal year (before tax):				
Amortization of net loss	\$ 5,605	\$ 3,919	\$	\$
Amortization of prior service credit	(335)	(472)	87	(36)
	\$ 5,270	\$ 3,447	\$ 87	\$ (36)
Additional information				
Accumulated benefit obligation for all defined benefit pension plans	\$ 204,359	\$ 175,927	N/A	N/A

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For defined benefit pension plans with benefit obligations in excess of plan assets:

Aggregate benefit obligation	206,800	176,654	N/A	N/A
Aggregate fair value of plan assets	135,505	127,133	N/A	N/A
For defined benefit pension plans with accumulated benefit obligations in excess of plan assets:				
Aggregate accumulated benefit obligation	200,163	171,908	N/A	N/A
Aggregate fair value of plan assets	135,505	127,133	N/A	N/A

Table of Contents**Components of net periodic benefit cost and other amounts recognized in other comprehensive income**

(Thousands)	Pension Benefits			Other Benefits		
	2011	2010	2009	2011	2010	2009
Net periodic benefit cost						
Service cost	\$ 6,955	\$ 5,135	\$ 4,463	\$ 284	\$ 273	\$ 289
Interest cost	9,786	9,156	8,994	1,596	1,738	1,929
Expected return on plan assets	(11,050)	(10,441)	(9,746)			
Amortization of prior service (benefit)	(335)	(530)	(549)	(36)	(36)	(36)
Recognized net actuarial loss	3,920	2,834	1,557			
Curtailement gain			(1,069)			
Net periodic benefit cost	\$ 9,276	\$ 6,154	\$ 3,650	\$ 1,844	\$ 1,975	\$ 2,182

(Thousands)	Pension Benefits			Other Benefits		
	2011	2010	2009	2011	2010	2009
Change in other comprehensive income						
OCI at beginning of year	\$ 69,716	\$ 62,886	\$ 61,379	\$ (275)	\$ (2,085)	\$ (356)
Increase (decrease) in OCI:						
Recognized during year prior service cost (credit)	335	530	549	36	36	36
Recognized during year net actuarial (losses) gains	(3,920)	(2,834)	(1,557)			
Occurring during year prior service cost	430	739				
Occurring during year net actuarial losses (gains)	37,543	8,390	1,974	1,419	1,774	(1,765)
Other adjustments			522			
Foreign currency exchange rate changes	(48)	5	19			
OCI at end of year	\$ 104,056	\$ 69,716	\$ 62,886	\$ 1,180	\$ (275)	\$ (2,085)

Summary of key valuation assumptions

	Pension Benefits			Other Benefits		
	2011	2010	2009	2011	2010	2009
Weighted-average assumptions used to determine benefit obligations at fiscal year end						
Discount rate	4.78%	5.49%	N/A	4.50%	5.13%	N/A
Rate of compensation increase	4.46%	3.97%	N/A	4.50%	4.00%	N/A
Weighted-average assumptions used to determine net cost for the fiscal year						
Discount rate	5.49%	5.86%	6.65%	5.13%	5.88%	6.15%
Expected long-term return on plan assets	7.88%	8.18%	8.22%	N/A	N/A	N/A
Rate of compensation increase	3.97%	2.99%	2.09%	4.00%	3.00%	2.00%

The Company uses a December 31 measurement date for the above plans.

Effective January 1, 2012, the Company revised the expected long-term rate of return assumption used in calculating the annual expense for its domestic pension plan. This assumed expected long-term rate of return was decreased to 7.75% from 8.0%, with the impact being accounted for as a change in estimate.

Effective January 1, 2011, the Company revised the expected long-term rate of return assumption used in calculating the annual expense for its domestic pension plan. This assumed expected long-term rate of return was decreased to 8.0% from 8.25%, with the impact being accounted for

as a change in estimate.

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Management establishes the domestic expected long-term rate of return assumption by reviewing its historical trends and analyzing the current and projected market conditions in relation to the plan's asset allocation and risk management objectives. Consideration is given to both recent plan asset performance as well as plan asset performance over various long-term periods of time, with an emphasis on the assumption being a prospective, long-term rate of return. Management consults with and considers the opinions of its outside investment advisors and actuaries when establishing the rate and reviews its assumptions with the Board of Directors. Management believes that the 7.75% domestic expected long-term rate of return assumption is achievable and reasonable given current market conditions and forecasts, asset allocations, investment policies and investment risk objectives.

The domestic rate of compensation increase assumption was changed from a flat 4.5% to a graded assumption as of January 1, 2009. The graded assumption for the domestic rate of compensation increase is 2.0% for the 2009 fiscal year, 3.0% for the 2010 fiscal year, 4.0% for the 2011 fiscal year and 4.5% for the 2012 fiscal year and later.

Assumptions for the defined benefit pension plans in Germany and England are determined separately from the U.S. plan assumptions, based on historical trends and current and projected market conditions in Germany and England. The plan in Germany is unfunded and the plan in England has assets that are approximately 3% of the Company's aggregated total fair value of plan assets as of year-end 2011.

Assumed health care trend rates at fiscal year end	2011	2010
Health care trend rate assumed for next year	8.00%	8.00%
Rate that the trend rate gradually declines to (ultimate trend rate)	5.00%	5.00%
Year that the rate reaches the ultimate trend rate	2019	2019

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effects:

(Thousands)	1-Percentage-Point Increase		1-Percentage-Point Decrease	
	2011	2010	2011	2010
Effect on total of service and interest cost components	\$ 33	\$ 35	\$ (30)	\$ (32)
Effect on post-retirement benefit obligation	806	682	(711)	(619)

Table of Contents**Plan Assets**

The following tables present the fair values of the Company's defined benefit pension plan assets as of December 31, 2011 and 2010 by asset category. See Note H to the Consolidated Financial Statements for definitions of fair value hierarchy.

(Thousands)	December 31, 2011			
	Total	Level 1	Level 2	Level 3
Cash	\$ 9,280	\$ 9,280	\$	\$
Equity securities:				
U.S. (a)	46,004	37,859	8,145	
International (b)	19,096	9,355	9,741	
Emerging markets (c)	10,784	10,569	215	
Fixed income securities:				
Intermediate-term bonds (d)	22,684	22,684		
Short-term bonds (e)	11,122	11,122		
Global bonds (f)	10,999	10,353	646	
Other types of investments:				
Real estate fund (g)	5,704	5,704		
Multi-strategy hedge funds (h)	3,989			\$ 3,989
Private equity funds	682			682
Total	\$ 140,344	\$ 116,926	\$ 18,747	\$ 4,671

(Thousands)	December 31, 2010			
	Total	Level 1	Level 2	Level 3
Cash	\$ 5,617	\$ 5,617	\$	\$
Equity securities:				
U.S. (a)	44,745	35,917	8,828	
International (b)	20,565	8,943	11,622	
Emerging markets (c)	12,300	12,084	216	
Fixed income securities:				
Intermediate-term bonds (d)	16,387	16,387		
Short-term bonds (e)	10,642	10,642		
Global bonds (f)	10,602	9,976	626	
Other types of investments:				
Real estate fund (g)	6,506	6,506		
Multi-strategy hedge funds (h)	3,851			\$ 3,851
Private equity funds	546			546
Total	\$ 131,761	\$ 106,072	\$ 21,292	\$ 4,397

- (a) Mutual funds that invest in various sectors of the U.S. market.
- (b) Mutual funds that invest in non-U.S. companies primarily in developed countries that are generally considered to be value stocks.
- (c) Mutual funds that invest in non-U.S. companies in emerging market countries.
- (d) Includes a mutual fund that employs a value-oriented approach to fixed income investment management and a mutual fund that invests primarily in investment-grade debt securities.
- (e) Includes a mutual fund that seeks a market rate of return for a fixed-income portfolio with low relative volatility of returns, investing generally in U.S. and foreign debt securities maturing in five years or less.
- (f) Mutual funds that invest in domestic and foreign sovereign securities, fixed income securities, mortgage-backed and asset-backed bonds, convertible bonds, high yield bonds and emerging market bonds.

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- (g) Includes a mutual fund that typically invests at least 80% of its assets in equity and debt securities of companies in the real estate industry or related industries or in companies which own significant real estate assets at the time of investment.
- (h) Includes hedge funds that employ multiple strategies to multiple asset classes with low correlations.

The following table summarizes changes in the fair value of the Company's defined benefit pension plan Level 3 assets measured using significant unobservable inputs during 2011 and 2010:

(Thousands)	Multi- strategy Hedge Funds	Private Equity Funds	Total
Balance as of January 1, 2010	\$ 3,507	\$ 786	\$ 4,293
Actual return:			
On assets still held at year-end 2010	686	66	752
On assets sold during the period	11		11
Purchases, sales and settlements	(353)	(306)	(659)
Balance as of December 31, 2010	\$ 3,851	\$ 546	\$ 4,397
Actual return:			
On assets still held at year-end 2011	376	172	548
On assets sold during the period		5	5
Purchases, sales and settlements	(238)	(41)	(279)
Balance as of December 31, 2011	\$ 3,989	\$ 682	\$ 4,671

Plan withdrawals from the multi-strategy hedge fund partnerships may be made up to 25% of the value of the capital account as of June 30 and December 31 of each calendar year upon written notice of at least thirty days. Any withdrawals in excess of 25% must have at least three months written notice. The plan may withdraw up to 100% of the capital account of all other partnerships upon at least thirty day written notice.

The Company's domestic defined benefit pension plan investment strategy, as approved by the Governance and Organization Committee of the Board of Directors, is to employ an allocation of investments that will generate returns equal to or better than the projected long-term growth of pension liabilities so that the plan will be self-funding. The return objective is to maximize investment return to achieve and maintain a 100% funded status over time, taking into consideration required cash contributions. The allocation of investments is designed to maximize the advantages of diversification while mitigating the risk and overall portfolio volatility to achieve the return objective. Risk is defined as the annual variability in value and is measured in terms of the standard deviation of investment return. Under the Company's investment policies, allowable investments include domestic equities, international equities, fixed income securities, cash equivalents and alternative securities (which include real estate, private venture capital investments and hedge funds). Ranges, in terms of a percentage of the total assets, are established for each allowable class of security. Derivatives may be used to hedge an existing security or as a risk reduction strategy. Current asset allocation guidelines are to invest 30% to 70% in equity securities, 20% to 50% in fixed income securities and cash and up to 20% in alternative securities. Management reviews the asset allocation on a quarterly or more frequent basis and makes revisions as deemed necessary.

None of the plan assets noted above are invested in the Company's common stock.

Cash Flows**Employer Contributions**

The Company expects to contribute \$11.2 million to its domestic defined benefit pension plan and \$2.4 million to its other benefit plans in 2012.

Table of Contents**Estimated Future Benefit Payments**

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

(Thousands)	Pension Benefits	Gross Benefit Payment	Other Benefits Net of Medicare Part D Subsidy
2012	\$ 7,597	\$ 2,788	\$ 2,427
2013	8,436	2,981	2,598
2014	9,020	2,813	2,409
2015	9,154	2,807	2,376
2016	9,884	2,821	2,371
2017 through 2021	64,380	14,234	11,577

Other Benefit Plans

In addition to the plans shown above, the Company also has certain foreign subsidiaries with accrued unfunded pension and other post-employment arrangements. The liability for these arrangements was \$3.2 million at December 31, 2011 and \$3.2 million at December 31, 2010 and was included in retirement and post-employment benefits on the Consolidated Balance Sheets.

The Company also sponsors defined contribution plans available to substantially all U.S. employees. Company contributions to the plans are based on matching a percentage of employee savings up to a specified savings level. The Company's annual contributions were \$2.2 million in 2011, \$1.3 million in 2010 and \$0.6 million in 2009. The Company reduced its matching percentage in half effective at the beginning of 2009, reduced its matching percentage to zero for the majority of its U.S. employees in the second quarter of 2009 and restored its matching percentage to half of its historical level in the second quarter of 2010.

Note J Contingencies and Commitments**CBD Claims**

The Company is a defendant from time to time in proceedings in various state and federal courts brought by plaintiffs alleging that they have contracted chronic beryllium disease (CBD) or related ailments as a result of exposure to beryllium. Plaintiffs in CBD cases seek recovery under theories of negligence and various other legal theories and seek compensatory and punitive damages, in many cases of an unspecified sum. Spouses, if any, often claim loss of consortium.

Employee cases, in which plaintiffs have a high burden of proof, have historically involved relatively small losses to the Company. Third-party plaintiffs (typically employees of customers) face a lower burden of proof than do the Company's employees, but these cases have generally been covered by varying levels of insurance. Management has vigorously contested the CBD cases brought against the Company.

Claims filed by third-party plaintiffs alleging CBD filed prior to the end of 2022 are covered by insurance if any portion of the alleged exposure period occurred prior to year end 2007. Both defense and indemnity costs are covered subject to an annual \$1.0 million deductible and other terms and provisions.

There were two CBD cases pending against the Company as of December 31, 2010. One of these cases was settled for less than \$0.1 million during 2011 while the other case was dismissed. There were no new CBD cases filed during 2011 and there were no cases outstanding as of December 31, 2011. Two cases were settled during 2010 for a total amount of less than \$0.1 million.

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Although it is not possible to predict the outcome of any pending litigation, the Company provides for costs related to litigation matters when a loss is probable and the amount is reasonably estimable. Litigation is subject to many uncertainties, and it is possible that some of the actions could be decided unfavorably in amounts exceeding the Company's reserves. An unfavorable outcome or settlement of a CBD case or adverse media coverage could encourage the commencement of additional similar litigation. The Company is unable to estimate its potential exposure to unasserted claims.

Based upon currently known facts and assuming collectibility of insurance, the Company does not believe that resolution of future beryllium proceedings will have a material adverse effect on the financial condition or cash flow of the Company. However, the Company's results of operations could be materially affected by unfavorable results in one or more cases.

Environmental Proceedings

The Company has an active program for environmental compliance that includes the identification of environmental projects and estimating their impact on the Company's financial performance and available resources. Environmental expenditures that relate to current operations, such as wastewater treatment and control of airborne emissions, are either expensed or capitalized as appropriate. The Company records reserves for the probable costs for identified environmental remediation projects. The Company's environmental engineers perform routine on-going analyses of the remediation sites and will use outside consultants to assist in their analyses from time to time. Accruals are based upon their analyses and are established at either the best estimate or, absent a best estimate, at the low end of the estimated range of costs. The accruals are revised for the results of on-going studies, changes in strategies, inflation and for differences between actual and projected costs. The accruals may also be affected by rulings and negotiations with regulatory agencies. The timing of payments often lags the accrual, as environmental projects typically require a number of years to complete.

The undiscounted reserve balance at the beginning of the year, the amounts expensed and paid and the balance at the end of the year for 2011 and 2010 are as follows:

(Thousands)	2011	2010
Reserve balance at beginning of year	\$ (5,201)	\$ (5,592)
Expensed	(324)	(262)
Paid	213	653
 Reserve balance at end of year	 \$ (5,312)	 \$ (5,201)
 Ending balance recorded in:		
Other liabilities and accrued items	\$ (1,000)	\$ (707)
Other long-term liabilities	(4,312)	(4,494)

The spending in 2011 was for various remediation projects at the Elmore, Ohio plant site and other locations. The majority of the spending in 2010 was for clean-up costs associated with the Company's former headquarters building; this facility had previously been used for light manufacturing and research and development work. Upon completion of the project, the facility was donated to a non-profit organization in the fourth quarter 2010.

The environmental reserves cover existing or currently foreseen projects. It is possible that additional environmental losses may occur beyond the current reserve balances, the extent of which cannot be estimated.

Long-term Obligation

The Company has a long-term supply agreement with Ulba/Kazatomprom of the Republic of Kazakhstan and its marketing representative, Nukem, Inc. of Connecticut for the purchase of approximately 775,000 pounds

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of beryllium copper master alloy that expires on December 31, 2012. The pricing for the beryllium content of the material is fixed while the price for the copper content fluctuates based upon the monthly average LME market price. Purchase commitments in 2012 total approximately \$5.3 million. Purchases made under this contract totaled \$8.8 million in 2011 and \$2.7 million in 2010. The material purchased from Nukem is used in the manufacture of beryllium-containing alloy products by the Performance Alloys segment.

Other

The Company is subject to various other legal or other proceedings that relate to the ordinary course of its business. The Company believes that the resolution of these proceedings, individually or in the aggregate, will not have a material adverse impact upon the Company's Consolidated Financial Statements.

The Company has outstanding letters of credit totaling \$25.6 million related to workers' compensation, consigned precious metal guarantees, environmental remediation issues and other matters that expire in 2012.

Note K Common Stock and Stock-based Compensation

The Company has five million shares of Serial Preferred Stock authorized (no par value), none of which have been issued. Certain terms of the Serial Preferred Stock, including dividends, redemption and conversion, will be determined by the Board of Directors prior to issuance.

A reconciliation of the changes in the number of shares of common stock issued is as follows:

(Thousands)	
Issued as of January 1, 2009	26,707
Exercise of stock options	32
Vesting of performance-restricted shares	61
Issued as of December 31, 2009	26,800
Exercise of stock options and SARs	162
Vesting of performance-restricted shares	6
Issued as of December 31, 2010	26,968
Exercise of stock options and SARs	55
Vesting of performance-restricted shares	1
Issued as of December 31, 2011	27,024

Stock incentive plans (the 2006 Stock Incentive Plan and the 2006 Non-employee Director Equity Plan) were approved at the May 2, 2006 annual meeting of shareholders. These plans authorize the granting of option rights, stock appreciation rights, performance restricted shares, performance shares, performance units and restricted shares and replaced the 1995 Stock Incentive Plan and the 1997 Stock Incentive Plan for Non-employee Directors, although there are still options outstanding under these plans. The 2006 Stock Incentive Plan and the 2006 Non-employee Director Equity Plan were amended to, among other things, add additional shares to the plans. These amendments were approved by shareholders at the May 2011 annual meeting.

Stock Options

Stock options may be granted to employees or non-employee directors of the Company. Option rights entitle the optionee to purchase common shares at a price equal to or greater than the market value on the date of grant. Option rights granted to employees generally become exercisable (i.e., vest) over a four-year period and expire ten years from the date of the grant. Options granted to employees may also be issued with shorter vesting periods. Options granted to non-employee directors vest in six months and expire ten years from the date of the

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grant. The number of options available to be issued is established in plans approved by shareholders. The exercise of options is generally satisfied by the issuance of new shares.

Compensation cost for options is determined at the date of the award through the use of a pricing model and charged against income over the vesting period for each award. There was no compensation cost in 2011, 2010 or 2009, as all options were fully vested prior to 2009.

The following table summarizes the Company's stock option activity during 2011:

(Shares in thousands)	Number of Options	Weighted-average Exercise Price Per Share	Aggregate Intrinsic Value	Weighted-average Remaining Term
Outstanding at December 31, 2010	166	\$ 14.69		
Exercised	(53)	13.95		
Outstanding at December 31, 2011	113	15.03	\$ 1,046,000	2.3 years
Vested and expected to vest as of December 31, 2011	113	15.03	1,046,000	2.3 years
Exercisable at December 31, 2011	113	15.03	1,046,000	2.3 years

Summarized information on options outstanding as of December 31, 2011 is as follows:

Range of Option Prices	Number Outstanding and Exercisable (Thousands)	Weighted-average Remaining Life (Years)	Weighted-average Exercise Price
\$5.55 - \$8.10	20	1.3	\$ 6.50
\$12.15-\$14.80	9	2.4	14.01
\$15.97-\$17.68	84	2.5	17.22
	113	2.3	\$ 15.03

Cash received from the exercise of stock options totaled \$0.7 million in 2011, \$2.6 million in 2010 and \$0.5 million in 2009. The tax benefit realized from tax deductions from exercises was \$0.5 million in 2011, \$0.8 million in 2010 and \$0.1 million in 2009. The total intrinsic value of options exercised during the years ended December 31, 2011, 2010 and 2009 was \$1.4 million, \$2.3 million and \$0.2 million, respectively.

Restricted Stock

The Company may grant restricted stock to employees and non-employee directors of the Company. These shares must be held and not disposed of for a designated period of time as defined at the date of the grant and are forfeited should the holder's employment terminate during the restriction period. The fair market value of the restricted shares is determined on the date of the grant and is amortized over the restriction period. The restriction period is typically three years.

The fair value of the restricted stock is based on the stock price on the date of grant. The weighted-average grant date fair value for 2011, 2010 and 2009 was \$39.18, \$22.65 and \$15.67, respectively.

Compensation cost was \$2.5 million in 2011, \$2.3 million in 2010 and \$2.4 million in 2009. The unamortized compensation cost on the outstanding restricted stock was \$3.4 million as of December 31, 2011 and is expected to be amortized over a weighted-average period of 24 months.

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The following table summarizes the restricted stock activity during 2011:

(Shares in thousands)	Number of Shares	Weighted- average Grant Date Fair Value
Outstanding at December 31, 2010	292	\$ 19.50
Granted	96	39.18
Vested	(57)	36.31
Forfeited	(20)	32.91
Outstanding at December 31, 2011	311	\$ 23.89

Long-term Incentive Plans

Under long-term incentive compensation plans, executive officers and selected other employees receive cash or stock awards based upon the Company's performance over the defined period, typically three years. Awards may vary based upon the degree to which actual performance exceeds the pre-determined threshold, target and maximum performance levels at the end of the performance periods. Payouts may be subjected to attainment of threshold performance objectives. Compensation expense is based upon the performance projections for the three-year plan period, the percentage of requisite service rendered and the fair market value of the Company's common stock on the date of grant. The offset to the compensation expense for the portion of the award to be settled in shares is recorded within shareholders' equity and was less than \$0.1 million for 2011 and 2010 and (\$0.3) million for 2009. The related balance in shareholders' equity was zero as of December 31, 2011. In the first quarter of 2011, approximately 1,300 shares of common stock were issued to participants for their achievement under the just completed 2008-2010 long-term incentive plan. There were no other long-term incentive plans outstanding as of December 31, 2011.

Directors Deferred Compensation

Non-employee directors may defer all or part of their fees into shares of the Company's common stock. The fair value of the deferred shares is determined at the share acquisition date and is recorded within shareholders' equity. Subsequent changes in the fair value of the Company's common stock do not impact the recorded values of the shares.

Prior to December 31, 2004, the non-employee directors had the election to defer their fees into shares of the Company's common stock or other specific investments. The directors could also transfer their deferred amounts among election choices. The fair value of the deferred shares is determined at the acquisition date and recorded within shareholders' equity with the offset recorded as a liability. Subsequent changes in the fair market value of the Company's common stock were reflected as a change in the liability and an increase or decrease to expense. Effective April 1, 2009, an amendment was adopted for this plan that no longer allows the participants to exchange into or out of the Company's common stock, resulting in the elimination of the market value adjustment and the reclassification of the liability to equity.

The following table summarizes the stock activity for the directors' deferred compensation plan during 2011:

(Shares in thousands)	Number of Shares	Weighted- average Grant Date Fair Value
Outstanding at December 31, 2010	120	\$ 27.05
Granted	11	38.00
Distributed	(30)	(33.25)
Outstanding at December 31, 2011	101	\$ 26.42

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The Company recorded an expense for the directors' deferred compensation plan of \$0.1 million in 2009. There was no income or expense associated with this plan recorded in 2011 or 2010 as a result of the 2009 amendment. During the years ended December 31, 2011, 2010 and 2009, the weighted-average grant date fair value of shares granted was \$38.00, \$25.13 and \$14.74, respectively.

Stock Appreciation Rights

The Company may grant stock appreciation rights (SARs) to certain employees and non-employee directors. Upon exercise of vested SARs, the participant will receive a number of shares of common stock equal to the spread (the difference between the market price of the Company's common stock at the time of the exercise and the strike price established in the SARs agreement) divided by the common stock price. The strike price of the SARs is equal to or greater than the market value of the Company's common shares on the day of the grant. The number of SARs available to be issued is established by plans approved by the shareholders. The vesting period and the life of the SARs are established in the SARs agreement at the time of the grant. The exercise of the SARs is satisfied by the issuance of treasury shares. The SARs typically vest three years from the date of grant and expire in ten years.

The following table summarizes the Company's SARs activity during 2011:

(Shares in thousands)	Number of SARs	Weighted-average Exercise Price Per Share	Aggregate Intrinsic Value	Weighted-average Remaining Term
Outstanding at December 31, 2010	697	\$ 19.96		
Granted	151	39.19		
Exercised	(7)	24.86		
Outstanding at December 31, 2011	841	23.39	\$ 3,900,000	6.8 years
Vested and expected to vest as of December 31, 2011	841	23.39	3,900,000	6.8 years
Exercisable at December 31, 2011	128	31.11	15,000	4.9 years

The weighted-average fair value of the SARs granted in 2011 was \$21.41. The fair value will be amortized to compensation cost on a straight-line basis over the three-year vesting period. Compensation cost was \$2.5 million, \$1.8 million and \$1.4 million in 2011, 2010 and 2009, respectively and was included in selling, general and administrative expense. The unamortized compensation cost balance was \$3.6 million as of December 31, 2011.

Summarized information on SARs outstanding as of December 31, 2011 follows:

SARs Prices	Number Outstanding (Thousands)	Weighted-average Remaining Life (Years)	Weighted-average Exercise Price
\$15.01	350	7.0	\$ 15.01
\$21.24	212	8.0	21.24
\$24.03	61	4.3	24.03
\$27.78	29	6.0	27.78
\$34.70-39.30	151	6.3	39.19
\$44.72	38	5.0	44.72
	841	6.8	\$ 23.39

The SARs granted at \$24.03, \$27.78 and \$44.72 are exercisable.

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The fair value of the SARs was estimated on the grant date using the Black-Scholes pricing model with the following assumptions:

	2011	2010	2009
Risk-free interest rate	0.03%	0.11%	0.31%
Dividend yield	0%	0%	0%
Volatility	58.7%	58.0%	55.0%
Expected lives (in years)	6.5	6.5	6.5

The risk-free rate of return was based upon the three-month Treasury bill rate at the time the SARs were granted. The Company has not paid a dividend since 2001. The share price volatility was calculated based upon the actual closing prices of the Company's shares at month end over a period of approximately ten years prior to the granting of the SARs. This approach to measuring volatility is consistent with the approach used to calculate the volatility assumption in the valuation of stock options. The Company's current SARs program has been in place since 2006. The expected life assumption was based upon prior analyses of stock options.

Note L Other Comprehensive Income

The following table summarizes the cumulative net gain (loss) by component, net of tax, within other comprehensive income as of December 31, 2011, 2010 and 2009:

(Thousands)	2011	December 31, 2010	2009
Foreign currency translation adjustment	\$ 4,947	\$ 3,989	\$ 2,324
Derivative financial instruments			
Gross	1,450	(1,543)	115
Deferred tax (benefit)	(895)	(1,942)	(1,362)
Net	2,345	399	1,477
Pension and other retirement plan adjustment			
Gross	(105,236)	(69,441)	(60,801)
Deferred tax (benefit)	(25,729)	(13,437)	(10,316)
Net	(79,507)	(56,004)	(50,485)
Total	\$ (72,215)	\$ (51,616)	\$ (46,684)

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In the fourth quarter 2010, the names of the Company's four reportable segments were changed. Advanced Material Technologies and Services has become Advanced Material Technologies, Specialty Engineered Alloys was revised to Performance Alloys, Beryllium and Beryllium Composites was shortened to Beryllium and Composites and Engineered Material Systems was changed to Technical Materials. These changes only affected the segment names as the segments make up, reporting structures and how they are evaluated remained unchanged from previous periods.

	Advanced Material Technologies	Performance Alloys	Beryllium and Composites	Technical Materials	Subtotal	All Other	Total
(Thousands)							
2011							
Sales to external customers	\$ 1,051,823	\$ 335,323	\$ 60,557	\$ 78,732	\$ 1,526,435	\$ 295	\$ 1,526,730
Intersegment sales	2,493	3,771	757	2,167	9,188		9,188
Operating profit (loss)	33,471	27,241	(754)	7,262	67,220	(10,142)	57,078
Depreciation, depletion and amortization	16,170	22,324	1,367	2,459	42,320	1,315	43,635
Expenditures for long-lived assets	8,014	10,599	6,460	2,286	27,359	1,388	28,747
Assets	342,819	235,547	127,708	21,502	727,576	44,527	772,103
2010							
Sales to external customers	\$ 878,994	\$ 293,757	\$ 61,894	\$ 67,450	\$ 1,302,095	\$ 219	\$ 1,302,314
Intersegment sales	1,718	6,086	397	2,597	10,798		10,798
Operating profit (loss)	39,454	27,150	10,046	5,331	81,981	(8,348)	73,633
Depreciation, depletion and amortization	16,443	14,186	1,070	2,449	34,148	1,246	35,394
Expenditures for long-lived assets	5,170	17,060	29,123	950	52,303	1,359	53,662
Assets	339,490	219,094	119,117	22,751	700,452	34,958	735,410
2009							
Sales to external customers	\$ 460,837	\$ 172,507	\$ 47,030	\$ 34,749	\$ 715,123	\$ 63	\$ 715,186
Intersegment sales	639	2,555	176	1,493	4,863		4,863
Operating profit (loss)	22,622	(32,273)	2,121	(2,526)	(10,056)	(9,429)	(19,485)
Depreciation, depletion and amortization	11,642	15,937	850	2,361	30,790	1,149	31,939
Expenditures for long-lived assets	4,496	3,802	34,542	430	43,270	1,711	44,981
Assets	274,949	191,806	81,073	21,252	569,080	52,873	621,953

Intersegment sales are eliminated in consolidation. The sales to external customers are presented net of intersegment sales. Segments are evaluated at the operating profit level.

The All Other column includes the parent company expenses, the operating results for Materion Services Inc., a wholly owned subsidiary, and other corporate charges. Materion Services Inc. provides administrative and financial services to the other businesses in the Company on a cost-plus basis.

The assets shown in the All Other column include the assets used by Materion Services Inc. and the parent company as well as cash and long-term deferred income taxes.

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Other geographic information includes the following:

(Thousands)	2011	2010	2009
Sales from U.S. operations	\$ 1,306,192	\$ 1,079,700	\$ 540,400
Sales based upon location of customers			
United States	\$ 1,143,720	\$ 933,264	\$ 466,031
All other	383,010	369,050	249,155
Total	\$ 1,526,730	\$ 1,302,314	\$ 715,186

Long-lived assets by country deployed