

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, 2009

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

BRUSH ENGINEERED MATERIALS INC.

(Exact name of Registrant as specified in its charter)

Ohio

*(State or other jurisdiction of
incorporation or organization)*

34-1919973

*(I.R.S. Employer
Identification No.)*

6070 Parkland Blvd., Mayfield Heights, Ohio

(Address of principal executive offices)

44124

(Zip Code)

Registrant's telephone number, including area code
216-486-4200

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

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock, no par value	New York Stock Exchange
Rights to Purchase Series A	New York Stock Exchange
Junior Participating Preferred Stock, no par value	

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

None

Indicate by check mark whether 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 Securities Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☐ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of 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 ☐ Smaller reporting company ☐
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

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 3, 2009 was \$314,026,839.

As of February 22, 2010, there were 20,277,083 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 5, 2010 are incorporated by reference into Part III.

BRUSH ENGINEERED MATERIALS INC.

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Year Ended December 31, 2009

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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, including the uncertainties related to the impact of the global economic crisis;
- The condition of the markets in which we serve, whether defined geographically or by segment, with the major market segments being telecommunications and computer, aerospace and defense, medical, industrial components, data storage, automotive electronics and appliance;
- Changes in product mix and the financial condition of customers;
- Actual sales, operating rates and margins for the year 2010;
- 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 newly acquired businesses, including the acquisitions of Barr Associates, Inc. and Academy Corporation;
- The impact of the results of operations of Barr Associates, Inc. and Academy Corporation on our ability to fully achieve the strategic and financial objectives related to these acquisitions, including the acquisitions being accretive to earnings in 2010;
- 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 being constructed in Elmore, Ohio;
- The availability of adequate lines of credit and the associated interest rates;
- Other financial factors, including the cost and availability of raw materials (both base and precious metals), tax rates, exchange rates, metal financing fees, 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 and terrorist activities;
- 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; and
- The risk factors set forth elsewhere in Part I, Item 1A of this Form 10-K.

Item 1. BUSINESS

Brush Engineered Materials Inc., through its wholly owned subsidiaries, is a manufacturer of advanced engineered materials serving the global telecommunications and computer, aerospace and defense, medical, industrial components, data storage, automotive electronics and appliance markets. As of December 31, 2009, we had 2,196 employees.

Our businesses are organized under four reportable segments: Advanced Material Technologies and Services (AMTS), Specialty Engineered Alloys (SEA), Beryllium and Beryllium Composites and Engineered Material Systems. AMTS consists of Williams Advanced Materials Inc. (WAM) and, beginning in the first quarter 2009, Zentrix Technologies Inc. (Zentrix). Previously, Zentrix had been included with the corporate office as part of All Other. We made this change because the Advanced Material Technologies and Services segment management is now responsible for Zentrix and this structure is consistent with our internal reporting and how the Chairman of the

Board evaluates the operations. The results for the prior years have been recast to reflect this change. SEA consists of Alloy Products, which includes bulk and strip form products, and beryllium hydroxide produced by Brush Resources Inc. (BRI). The Beryllium and Beryllium Composites segment consists of Beryllium Products and Brush Ceramic Products Inc., while the Engineered Material Systems segment consists of Technical Materials, Inc. (TMI).

All Other includes our parent company expenses, other corporate charges and the operating results of BEM 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 covered as part of a reportable segment totaled 98 as of December 31, 2009.

We use our Investor Relations web site, www.beminc.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 Annual Report unless expressly noted.

ADVANCED MATERIAL TECHNOLOGIES AND SERVICES

Sales for this segment were \$460.8 million, or 64% of total sales, in 2009, \$480.3 million, or 53% of total sales, in 2008 and \$533.5 million, or 56% of total sales, in 2007. As of December 31, 2009, AMTS had 963 employees.

AMTS 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, specialty inorganic materials, optics, performance coatings and electronic packages. These products are used in wireless, semiconductor, photonic, hybrid and other micro-electronic applications within the telecommunications and computer market. Other key markets for these products include medical, data storage, defense, security and solar energy. An in-house refinery and metal cleaning operations allow for the reclaim of precious metals from internally generated or customers' scrap. In October 2009, we purchased Barr Associates, Inc., based in Westford, Massachusetts, which supplies optical filters, optical reflectors and high-end coated products and devices in support of defense, space and commercial applications for detection devices to aid in analysis and soldier protection. In January 2010, we purchased Academy Corporation, based in Albuquerque, New Mexico, which supplies precious metal targets to the architectural glass, solar energy, medical and microelectronics industries and has refining capabilities for reclaim of precious metals from secondary scrap markets.

AMTS' 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. and a number of smaller regional and national suppliers.

Advanced Material Technologies and Services — Sales and Backlog

The backlog of unshipped orders for AMTS as of December 31, 2009, 2008 and 2007 was \$51.3 million, \$34.6 million and \$29.5 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, 2009 will be filled during 2010.

Sales are made to over 2,800 customers. Government sales, principally subcontracts, accounted for less than 1% of the sales volume in 2009, 2008 and 2007. Sales outside the United States, principally to Europe and Asia, accounted for approximately 29% of sales in 2009, 28% of sales in 2008 and 41% of sales in 2007. Other segment reporting and geographic information is contained in Note M of Notes to Consolidated Financial Statements, which can be found in Part II, Item 8 of this Form 10-K and which is incorporated herein by reference.

Advanced Material Technologies and Services — 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 AMTS amounted to \$3.2 million in 2009, \$2.9 million in 2008 and \$2.1 million in 2007. A staff of 22 scientists, engineers and technicians was employed in this effort as of year-end 2009.

SPECIALTY ENGINEERED ALLOYS

Sales for this segment were \$172.5 million, or 24% of total sales, in 2009, \$299.9 million, or 33% of total sales, in 2008 and \$290.0 million, or 30% of total sales, in 2007. As of December 31, 2009, SEA had 767 employees.

SEA 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 telecommunications and computer, automotive electronics, appliance and medical. SEA's primary direct competitor in strip form beryllium alloys is NGK Insulators, Ltd. of Nagoya, Japan, with subsidiaries in the United States and Europe. SEA 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., SEA competes with several smaller regional producers such as International Beryllium Corp., LaBronze Industriel in Europe and Young II in Asia.

Beryllium hydroxide is produced by Brush Resources Inc., a wholly owned subsidiary, at its milling operations in Utah from its 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 Beryllium Composites segment. External sales of hydroxide from the Utah operations were less than 4% of Specialty Engineered Alloys' total sales in each of the three most recent years. BRI sells beryllium hydroxide externally 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.

Specialty Engineered Alloys — Sales and Backlog

The backlog of unshipped orders for SEA as of December 31, 2009, 2008 and 2007 was \$68.6 million, \$55.5 million and \$71.5 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, 2009 will be filled during 2010.

Sales are made to over 2,100 customers. SEA had government sales, principally subcontracts, accounting for less than 1% of segment sales in 2009 and 2007 and none in 2008. Sales outside the United States, principally to Europe and Asia, accounted for approximately 57% of sales in 2009 and 2008, and 58% of sales in 2007. Other segment reporting and geographic information is contained in Note M of Notes to Consolidated Financial Statements, which can be found in Part II, Item 8 of this Form 10-K and which is incorporated herein by reference.

Specialty Engineered 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 \$2.2 million in 2009, \$2.3 million in 2008 and \$1.9 million in 2007. A staff of seven scientists, engineers and technicians was employed in this effort as of year-end 2009.

BERYLLIUM AND BERYLLIUM COMPOSITES

Sales for this segment were \$47.0 million, or 7% of total sales, in 2009, \$63.6 million, or 7% of total sales, in 2008 and \$60.5 million, or 6% of total sales, in 2007. As of December 31, 2009, Beryllium and Beryllium Composites had 211 employees.

Beryllium and Beryllium 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. Defense and government-related applications, including aerospace, is the largest market for Beryllium and Beryllium Composites, while other markets served include medical, telecommunications and computer, electronics (including acoustics), optical scanning and general industrial. In June 2008, we announced that Brush Wellman Inc. had entered into an agreement with the Department of Defense to construct a \$90.3 million primary beryllium facility. This facility will produce primary beryllium, the feedstock material used to produce beryllium metal products. Construction of this facility is on schedule for completion in the second half of 2010. Beryllium-containing products are sold throughout the world through a direct sales organization and through company-owned and independent distribution centers. While Beryllium and Beryllium Composites is the only domestic producer of metallic beryllium, it competes primarily with designs utilizing other materials including metals, metal matrix and organic composites.

This segment also manufactures beryllia ceramics through Brush Ceramic Products Inc., a wholly owned subsidiary in Tucson, Arizona. Electronic components utilizing beryllia are used in the telecommunications, medical, industrial and defense markets. These products are distributed through direct sales and independent sales agents. Direct competitors include American Beryllia Inc. and CBL Ceramics Limited.

Beryllium and Beryllium Composites — Sales and Backlog

The backlog of unshipped orders for Beryllium and Beryllium Composites as of December 31, 2009, 2008 and 2007 was \$38.1 million, \$28.7 million and \$23.9 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, 2009 will be filled during 2010.

Sales are made to over 300 customers. Government sales, principally subcontracts, accounted for less than 2% of Beryllium and Beryllium Composites' sales in 2009, less than 1% of segment sales in 2008 and 1% of segment sales in 2007. Sales outside the United States, principally to Europe and Asia, accounted for approximately 22% of sales in 2009, 23% of sales in 2008 and 22% of sales in 2007. Other segment reporting and geographic information is contained in Note M of Notes to Consolidated Financial Statements, which can be found in Part II, Item 8 of this Form 10-K and which is incorporated herein by reference.

Beryllium and Beryllium 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 \$1.4 million in 2009, \$1.3 million in 2008 and \$1.0 million in 2007. A staff of seven scientists, engineers and technicians was employed in this effort as of year-end 2009. Some research and development projects, expenditures for which are not material, were externally sponsored and funded.

ENGINEERED MATERIAL SYSTEMS

Sales for this segment were \$34.7 million, or 5% of total sales, in 2009, \$65.9 million, or 7% of total sales, in 2008 and \$70.9 million, or 7% of total sales, in 2007. As of December 31, 2009, Engineered Material Systems had 157 employees.

Engineered Material Systems 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 brazing alloy to be applied to a base metal only where it is needed, reducing the material cost to the customer as well as providing design flexibility. Major applications for these products include connectors, contacts and semiconductors while the largest markets are automotive electronics, telecommunications and computer and data storage. The energy and defense and medical electronic markets are smaller but offer further growth opportunities. Engineered Material Systems' products are manufactured at our Lincoln, Rhode Island facility. Engineered Material Systems' products are sold directly and through its sales representatives. Engineered Material Systems has limited competition in the United States and several European manufacturers are competitors for the sale of inlay strip.

Engineered Material Systems — Sales and Backlog

The backlog of unshipped orders for Engineered Material Systems as of December 31, 2009, 2008 and 2007 was \$7.6 million, \$7.6 million and \$12.2 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, 2009 will be filled during 2010.

Sales are made to over 100 customers. Engineered Material Systems did not have any sales to the government for 2009, 2008 or 2007. Sales outside the United States, principally to Europe and Asia, accounted for approximately 21% of Engineered Material Systems' sales in 2009, 17% of sales in 2008 and 13% of sales in 2007. Other segment reporting and geographic information is contained in Note M of Notes to Consolidated Financial Statements, which can be found in Part II, Item 8 of this Form 10-K and which is incorporated herein by reference.

Engineered Material Systems — 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 Engineered Material Systems were nominal in 2009, 2008 and 2007.

GENERAL

Availability of Raw Materials

The principal raw materials we use are beryllium (extracted from both imported beryl ore and bertrandite ore mined from our Utah properties), copper, gold, silver, nickel, platinum, palladium, aluminum and ruthenium. Ore reserve data can be found in Part II, 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.

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 which 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

<u>Name</u>	<u>Age</u>	<u>Positions and Offices</u>
Richard J. Hipple	57	<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 Brush Engineered Materials Inc. 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 Alloy Products from May 2002 until May 2005. He joined the Company in July 2001 as Vice President of Strip Products and served in that position until May of 2002. Prior to joining Brush, 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 June 2007.
John D. Grampa	62	<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 since March 1994 and held other various positions at Avery Dennison Corporation (producer of pressure sensitive materials, office products, labels and other converted products) from 1984.
Daniel A. Skoch	60	<i>Senior Vice President Administration.</i> 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.

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 Annual Report on 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.

Health issues, litigation and government regulation 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 material 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, continued or increased 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 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, 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. 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.

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 beryllium-containing and non-beryllium-containing 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, copper beryllium has long been used for high reliability contacts in mobile handheld devices. Mobile device designers may justify using lower-performance materials in some of the less-critical components of mobile phones. 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 significant research and development costs, which could adversely affect our margins and profitability.

We are dependent on the successful scheduled completion of a 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 construction delays and quality and/or production issues in start-up of this new facility. Any prolonged delays of pure beryllium production from the new plant could negatively impact our Company.

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

We are currently involved in certain legal proceedings, including those involving product liability claims, and third-party lawsuits relating to exposure to beryllium as well as claims against us of infringement of intellectual property rights of third parties and other claims arising out of the ordinary conduct of our business. Due to the uncertainties of litigation, we can give no assurance that we will prevail on claims made against us in the lawsuits that we currently face or that additional claims will not be made against us in the future. 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 additional adverse media coverage could encourage the commencement of additional similar litigation.

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 the Company's revenues.

In 2009, 8% of our revenue was derived from sales to customers in the aerospace and defense 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 these cancellations were to occur, it would result in a reduction to Company revenues. For example, various projects including the F-22 fighter aircraft have been canceled, which had and will have a negative impact on our sales.

Our beryllium-containing and non-beryllium-containing 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.

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 telecommunications and computer, aerospace and defense, industrial components, data storage, 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.

The global economic crisis is having a negative impact on our financial performance.

The global economic crisis continues to adversely affect the global economy. Some customers are experiencing difficulty in obtaining adequate financing due to the current disruption in the credit markets, which has impacted our sales. Our exposure to bad debt losses may also increase if customers are unable to pay for products previously ordered. The severe recession has also caused higher unemployment rates globally which could have an adverse affect on demand for consumer electronics, which comprised over 55% of our sales in 2009. Continuation or further deterioration of these financial and macroeconomic conditions may have a significant adverse effect on our sales, profitability and 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 one of our subsidiaries, Williams Advanced Materials Inc. 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 precious metals. These covenants could adversely affect us 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 crisis is prolonged, 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.

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 35% of our sales in 2009, 37% in 2008 and 43% in 2007. 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 24% of our sales in 2009 and 2008 and 25% in 2007. 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;
- potentially adverse tax consequences due to overlapping or differing tax structures; and
- fluctuations in currency exchange rates.

Additionally, foreign and international regulations have also impacted our sales, margins and profitability in the past. See also “— Health issues, litigation and government regulation relating to machining and manufacturing of beryllium-containing products could significantly reduce demand for our products, limit our ability to operate and adversely affect our profitability”, and “— 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”. Further, any of these risks could continue in the future.

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 Part II, Item 7A of this Form 10-K.

The availability and prices of some raw materials we use in our manufacturing operations fluctuate, and increases in raw material costs can increase our operating costs.

We manufacture advanced engineered materials using various precious and non-precious metals, including gold, silver, palladium, platinum, ruthenium, copper and nickel. 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. Decreased availability and fluctuating prices of precious and non-precious metals that we use in our manufacturing can increase our operating costs. For example, prices for copper have been very volatile in recent months due to global demand and market conditions. 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.

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 causes 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.

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, one of

our major markets, and other unexpected events. For example, Delphi Corporation, a customer of three of our business units and the largest United States supplier of automotive parts, filed for bankruptcy protection in 2005. Delphi Corporation emerged from bankruptcy reorganization in 2009. Similar events could also affect other suppliers to our customers. In either case, 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.

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 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.

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. — Properties," 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 have continued to 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, will continue to 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 — Properties”, 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.

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.

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.

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 liquidity facilities on acceptable terms;
- a deterioration of our credit;
- a deterioration in the financial condition of the banks in 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.

All of these factors have adversely impacted our access to the financial markets at various times over the last five years. The global economic crisis 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.

Low investment performance by our domestic pension plan assets 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 December 31, 2009, for pension accounting purposes, we assumed an 8.25% 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 twelve months ending December 31, 2009 was a gain of approximately 16%.

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 \$8 million to our pension plan in 2010. If our current assumptions and estimates are not correct, a contribution in years beyond 2010 may be greater than the projected 2010 contribution required.

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, 2009 and December 31, 2008. In addition, we have assumed that this health care cost increase trend rate will decline to 5% by 2016. We have used the same discount rates for our retiree health plans that we use for our pension plan accounting.

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 benefits included among the liabilities in our balance sheet by \$0.6 million at December 31, 2009.

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.

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 35% of sales in 2009, 37% in 2008 and 43% in 2007. 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 \$0.1 million at December 31, 2009, indicating that the average hedge rates were slightly 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, any hedging activities may not be successful.

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, 2009 was \$67.0 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.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

We operate manufacturing plants, service and other facilities throughout the world. During 2009, 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, 2009, with respect to our significant facilities that are owned or leased, and the respective segments in which they are included, is set forth below.

<u>Location</u>	<u>Owned or Leased</u>	<u>Approximate Number of Square Feet</u>
<i>Corporate and Administrative Offices</i>		
Mayfield Heights, Ohio ⁽²⁾⁽³⁾⁽⁵⁾	Leased	53,800
<i>Manufacturing Facilities</i>		
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	556,000/300,000
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
Singapore ⁽¹⁾	Leased	4,500
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
<i>Service and Distribution Centers</i>		
Elmhurst, Illinois ⁽²⁾	Leased	28,500
Fukaya, Japan ⁽²⁾⁽³⁾⁽⁴⁾	Owned	35,500
Singapore ⁽²⁾⁽³⁾⁽⁴⁾	Leased	2,500
Stuttgart, Germany ⁽²⁾⁽⁴⁾	Leased	24,800
Theale, England ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾	Leased	9,700
Tokyo, Japan ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾	Leased	6,900
Warren, Michigan ⁽²⁾	Leased	34,500

⁽¹⁾ Advanced Material Technologies and Services

⁽²⁾ Specialty Engineered Alloys

⁽³⁾ Beryllium and Beryllium Composites

⁽⁴⁾ Engineered Material Systems

⁽⁵⁾ All Other

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 Part II, 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, 2009, our subsidiary, Brush Wellman Inc., was a defendant in four proceedings in various state and federal courts brought by plaintiffs alleging that they have contracted, or have 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 seek recovery under negligence and various other legal theories and seek compensatory and punitive damages, in many cases of an unspecified sum. Spouses of some plaintiffs claim loss of consortium.

As of December 31, 2008, there were nine beryllium cases (involving 36 plaintiffs) and as of December 31, 2009, there were four beryllium cases (involving eight plaintiffs). During 2009:

- two plaintiffs were added to one pending case;
- one plaintiff was dismissed from one pending case;
- two cases (involving nine plaintiffs) were dismissed;
- three cases (involving 16 plaintiffs) were settled and dismissed; and
- two plaintiffs were dismissed from one purported class action (involving nine named plaintiffs) during the third quarter; and the denial of class certification was affirmed by the appellate court during the third quarter, which plaintiffs did not appeal; therefore, the case is proceeding as an individual claim (involving five plaintiffs), and two additional plaintiffs were dismissed because they have separate claims pending.

The four pending beryllium cases as of December 31, 2009 fall into two categories: three cases involving five individual plaintiffs, plus two spouses with consortium claims, and one purported class action, involving one named plaintiff, as discussed more fully below. These cases are covered by insurance, subject to an annual deductible.

The first purported class action is Gary Anthony v. Small Tube Manufacturing Corporation d/b/a Small Tube Products Corporation, Inc., et al., filed in the Court of Common Pleas of Philadelphia County, Pennsylvania, case number 000525, on September 7, 2006. The case was removed to the U.S. District Court for the Eastern District of Pennsylvania, case number 06-CV-4419, on October 4, 2006. The only named plaintiff is Gary Anthony. The defendants are Small Tube Manufacturing Corporation, d/b/a Small Tube Products Corporation, Inc.; Admiral Metals Inc.; Tube Methods, Inc.; and Cabot Corporation. The plaintiff purports to sue on behalf of a class of current and former employees of the U.S. Gauge facility in Sellersville, Pennsylvania who have ever been exposed to beryllium for a period of at least one month while employed at U.S. Gauge. The plaintiff has brought claims for negligence. Plaintiff seeks the establishment of a medical monitoring trust fund, cost of publication of approved guidelines and procedures for medical screening and monitoring of the class, attorneys' fees and expenses. Defendant Tube Methods, Inc. filed a third-party complaint against Brush Wellman Inc. in that action on November 15, 2006. Tube Methods alleges that Brush supplied beryllium-containing products to U.S. Gauge, and that Tube Methods worked on those products, but that Brush is liable to Tube Methods for indemnification and contribution. Brush moved to dismiss the Tube Methods complaint on December 22, 2006. On January 12, 2007, Tube Methods filed an amended third-party complaint, which Brush moved to dismiss on January 26, 2007; however, the Court denied the motion on September 28, 2007. Brush filed its answer to the amended third-party complaint on October 19, 2007. On November 14, 2007, two of the defendants filed a joint motion for an order permitting discovery to make the threshold determination of whether plaintiff is sensitized to beryllium. On February 29, 2008, Brush filed a motion for summary judgment based on plaintiff's lack of any substantially increased risk of CBD. Oral argument on this motion took place on June 13, 2008. On September 30, 2008, the court granted the motion for summary judgment in favor of all of the defendants and dismissed plaintiff's class action complaint. On October 29, 2008, plaintiff filed a notice of appeal. The Court of Appeals had granted a motion to stay

the appeal due to the bankruptcy of one of the appellees, Millennium Petrochemicals. On April 3, 2009, Small Tube Manufacturing filed a motion for relief in bankruptcy court from the automatic stay, asking that the bankruptcy court modify the stay to allow Small Tube Manufacturing's indemnification claim against Millennium Petrochemicals and the Anthony case to proceed to final judgment, including all appeals. On May 14, 2009, the bankruptcy court approved a stipulation and order modifying the automatic stay to permit Millennium Petrochemicals and Small Tube Manufacturing to participate in the appeal. On May 27, 2009, Small Tube Manufacturing filed an unopposed motion with the Court of Appeals to lift the stay, which the court granted on June 22, 2009. On July 29, 2009, the Company and the other appellees filed their brief in the Court of Appeals.

As reported above, the Company had one purported class action that is now proceeding as an individual claim. The second purported class action was Manuel Marin, et al. v. Brush Wellman Inc., filed in Superior Court of California, Los Angeles County, case number BC299055, on July 15, 2003. The named plaintiffs were Manuel Marin, Lisa Marin, Garfield Perry and Susan Perry. The defendants were Brush Wellman, Appanaitis Enterprises, Inc., and Doe Defendants 1 through 100. A First Amended Complaint was filed on September 15, 2004, naming five additional plaintiffs. The five additional named plaintiffs were Robert Thomas, Darnell White, Leonard Joffrion, James Jones and John Kesselring. The plaintiffs alleged that they had been sensitized to beryllium while employed at the Boeing Company. The plaintiffs' wives claimed loss of consortium. The plaintiffs purported to represent two classes of approximately 250 members each, one consisting of workers who worked at Boeing or its predecessors and were beryllium sensitized and the other consisting of their spouses. They brought claims for negligence, strict liability — design defect, strict liability — failure to warn, fraudulent concealment, breach of implied warranties, and unfair business practices. The plaintiffs sought injunctive relief, medical monitoring, medical and health care provider reimbursement, attorneys' fees and costs, revocation of business license, and compensatory and punitive damages. Messrs. Marin, Perry, Thomas, White, Joffrion, Jones and Kesselring represented current and past employees of Boeing in California; and Ms. Marin and Ms. Perry were spouses. Defendant Appanaitis Enterprises, Inc. was dismissed on May 5, 2005. Plaintiffs' motion for class certification, which the Company opposed, was heard by the court on February 8, 2008, and the motion was denied by the court on May 7, 2008. Plaintiffs filed a notice of appeal on May 20, 2008. Oral argument took place on July 22, 2009. On August 24, 2009, the Court of Appeals issued a decision affirming the denial of class certification. Messrs. Thomas and White were dismissed as plaintiffs due to their deaths. Plaintiffs did not appeal the decision of the Court of Appeals. The case is now proceeding as an individual claim involving five plaintiffs (Messrs. Marin, Perry and Kesselring and the spouses of Messrs. Marin and Perry). Messrs. Jones and Joffrion were dismissed from this case because they already had individual claims pending. The Marin case has been stayed pending the trials of the Jones and Joffrion cases, which are scheduled for March 30, 2010.

Subsequent Events

From January 1, 2010 to March 8, 2010, the following subsequent events took place. In the Anthony case, the Court of Appeals heard oral arguments on January 11, 2010, and the matter is now under submission.

Other Claims

One of our subsidiaries, Williams Advanced Materials Inc. (WAM), is a party to patent litigation in the U.S. involving Target Technology Company, LLC of Irvine, California (Target). The litigation involves patents directed to technology used in the production of DVD-9s, which are high storage capacity DVDs, and other optical recording media. The patents at issue primarily concern certain silver alloys used to make the semi-reflective layer in DVD-9s, a thin metal film that is applied to a DVD-9 through a process known as sputtering. The raw material used in the sputtering process is called a target. Target alleges that WAM manufactures and sells infringing sputtering targets to DVD manufacturers.

In the first action, filed in April 2003 by WAM against Target in the U.S. District Court, Western District of New York (case no. 03-CV-0276A (SR)) (the NY Action), WAM had asked the Court for a judgment declaring certain Target patents invalid and/or unenforceable and awarding WAM damages. Target counterclaimed alleging infringement of those patents and seeking a judgment for infringement, an injunction against further infringement and damages for past infringement. Following certain proceedings in which WAM was denied an injunction to prevent Target from suing and threatening to sue WAM's customers, Target filed an amended counterclaim and a

third-party complaint naming certain of WAM's customers and other entities as parties to the case and adding related other patents to the NY Action. The action temporarily was stayed pending resolution of the ownership issue in the CA Action (defined below), as discussed more fully below. On January 26, 2009, the Court in the CA Action ordered that the case and remaining issues be transferred to the Court in the NY Action. As a result, the stay in the NY Action has been lifted, and the Court in the NY Action has consolidated the CA Action with the NY Action. With the parties having resumed pre-trial proceedings, Target had moved the Court to further amend its counts for infringement to include only certain claims of six of the patents claimed to be owned by Target. If granted, Target's counts for infringement of other claims in those patents and six other patents claimed to be owned by Target would be removed from the NY Action. WAM had opposed the motion to the extent Target seeks dismissal without prejudice of the counts for infringement of the other claims and other patents. Following a Court hearing on Target's motion to amend its pleadings and upon agreement of the parties, Target further amended its counts for infringement to include a total of nine U.S. patents and withdrawing four other patents. In response to Target's amendment of its pleadings, WAM moved for (a) dismissal of Target's counts for lack of jurisdiction on the basis that Target did not own the patents, (b) terminating sanctions on the basis of litigation misconduct by Target, and (c) a stay of discovery pending a decision by the Court on the first two WAM motions, all of which motions are pending. WAM continues to dispute Target's claims of ownership of all of the patents and denies both validity and infringement of the patent claims. Following a September 11, 2009 oral argument on WAM's motions, the Magistrate Judge reserved decision and pending the Court's action on the motions effectively stayed further discovery. On October 28, 2009, the Magistrate Judge recommended to the District Court Judge that the Court deny WAM's motion for dismissal of Target's counts for lack of jurisdiction on the basis of WAM's claim that Target did not own the patents. The Magistrate Judge reasoned that, in view of the earlier reported November 2008 settlement agreement between the Sony companies and Target, any lack of jurisdiction was cured when in July 2009, Target filed an amended answer. The Magistrate Judge further deferred until trial WAM's motion for terminating sanctions because of Target's litigation misconduct, but reopened discovery. Both WAM and Target objected to the Magistrate Judge's report, and their objections are yet to be heard by the District Court Judge before he may rule on the recommendation. Notwithstanding the Magistrate Judge's recommendation, WAM continues to dispute Target's claims of ownership of the patents remaining in the Action, and to deny both validity and infringement of the patents. The Magistrate Judge by separate order and with the consent of the parties referred the case to a mediator for consideration under the Court's alternate dispute resolution plan, which mediation is ongoing. No deadline to complete discovery has yet been set, nor has a trial date been scheduled.

Target in September 2004 filed in the U.S. District Court, Central District of California (case no. SAC04-1083 DOC (MLGx)), a separate action for infringement of one of the same patents named in the NY Action (the CA Action), naming as defendants WAM and certain of WAM's customers who purchase certain WAM sputtering targets. Target sought a judgment that the patent is valid and infringed by the defendants, a permanent injunction, a judgment on ownership of certain Target patents, damages adequate to compensate Target for the infringement, treble damages and attorneys' fees and costs. In April 2007, Sony DADC U.S., Inc. among other Sony companies (Sony) had intervened in the CA Action claiming ownership of that patent and others of the patents that Target is seeking to enforce in the NY Action. Sony's claim was based on its prior employment of the patentee and Target's founder, Han H. Nee (Nee), and had included a demand for damages against both Target and Nee. WAM on behalf of itself and its customers has a paid-up license from Sony under any rights that Sony has in those patents. Although trial of the CA Action had been scheduled for March 2009, in December 2008, a confidential settlement agreement was reached between Target and Sony, as well as a partial settlement agreement between Target and WAM releasing WAM and its customers from infringement of the one named patent. As a result, the issues not subject to any settlement were (1) a remaining count in which the Target parties had requested a judgment declaring that Target is the owner of certain of the Target patents and (2) WAM's request for sanctions against Target. Pursuant to various stipulations filed by the parties, the Court on January 6, 2009 ordered a dismissal with prejudice of all of the respective intervention claims and counterclaims between the Target parties and the Sony companies, and a dismissal without prejudice of the counterclaims by WAM and its defendant customers, the exception being the remaining declaratory judgment count on patent ownership. Following motions filed by the parties, the Court on January 26, 2009 ordered that the case and remaining issues be transferred to the Court in the NY Action.

Item 4. RESERVED**PART II****Item 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

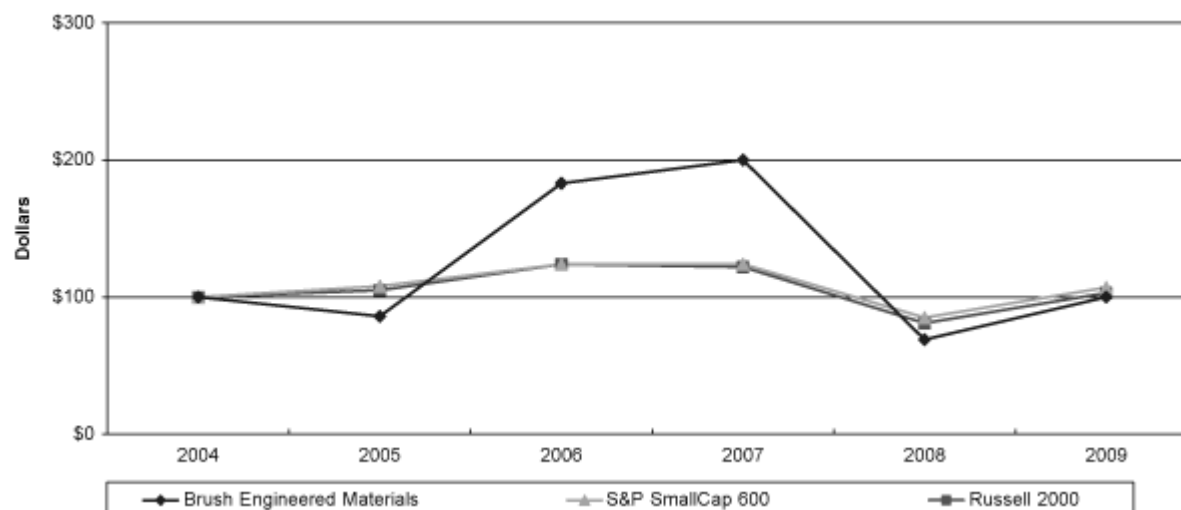
Market Information and Dividends

The Company's common shares are listed on the New York Stock Exchange under the symbol "BW". As of February 22, 2010, there were 1,444 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 2009 and 2008. We did not pay any dividends in 2009 or 2008. 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 the use in the operation and expansion of our business.

<u>Fiscal Quarters</u>	<u>Stock Price Range</u>	
	<u>High</u>	<u>Low</u>
2009		
First	\$17.27	\$10.50
Second	19.19	12.41
Third	25.38	14.11
Fourth	27.06	17.11
2008		
First	\$38.12	\$23.77
Second	34.63	24.60
Third	31.27	19.07
Fourth	19.41	6.98

Performance Graph

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 Brush Engineered Materials Inc. is a component company of these indices.



	2004	2005	2006	2007	2008	2009
Brush Engineered Materials	\$100	\$ 86	\$183	\$200	\$69	\$100
S&P SmallCap 600	\$100	\$108	\$124	\$124	\$85	\$107
Russell 2000	\$100	\$105	\$124	\$122	\$81	\$103

The above graph assumes that the value of our common shares and each index was \$100 on December 31, 2004 and that all dividends, if paid, were reinvested.

Item 6. SELECTED FINANCIAL DATA

Brush Engineered Materials Inc. and Subsidiaries

(Thousands except for per share data)	2009	2008	2007	2006	2005
For the year					
Net sales	\$ 715,186	\$ 909,711	\$ 955,709	\$ 763,054	\$ 541,267
Cost of sales	623,764	757,836	759,037	600,882	431,024
Gross margin	91,422	151,875	196,672	162,172	110,243
Operating (loss) profit	(19,485)	28,071	84,465	43,840	19,509
Interest expense — net	1,299	1,995	1,760	4,135	6,372
(Loss) income before income taxes	(20,784)	26,076	82,705	39,705	13,137
Income taxes (benefit)	(8,429)	7,719	29,420	(9,898)	(4,688)
Net (loss) income	(12,355)	18,357	53,285	49,603	17,825
Earnings per share of common stock:					
Basic	(0.61)	0.90	2.62	2.52	0.93
Diluted	(0.61)	0.89	2.59	2.45	0.92
Depreciation and amortization	32,369	34,204	24,296	25,141	22,790
Capital expenditures	44,173	35,515	26,429	15,522	13,775
Mine development expenditures	808	421	7,121	—	—
Year-end position					
Working capital	140,482	189,899	216,253	158,061	115,531
Ratio of current assets to current liabilities	2.0 to 1	2.8 to 1	2.9 to 1	2.4 to 1	2.4 to 1
Property and equipment:					
At cost	665,361	635,266	583,961	557,861	540,420
Cost less depreciation and impairment	227,766	207,254	186,175	175,929	177,062
Total assets	621,953	581,897	550,551	498,606	402,702
Long-term liabilities	131,630	116,524	69,140	70,731	73,492
Long-term debt	8,305	10,605	10,005	20,282	32,916
Shareholders' equity	339,859	347,097	353,714	291,000	211,478
Weighted-average number of shares of stock outstanding:					
Basic	20,191	20,335	20,320	19,665	19,219
Diluted	20,191	20,543	20,612	20,234	19,371

Capital expenditures shown above include amounts spent under government contracts for which reimbursements were received from the government in the amounts of \$28.2 million in 2009, \$8.0 million in 2008 and \$3.5 million in 2007. The reimbursements are recorded within long-term liabilities.

Changes in deferred tax valuation allowances decreased income tax expense by \$21.8 million in 2006 and \$8.1 million in 2005.

See Notes to Consolidated Financial Statements.

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 telecommunications and computer, aerospace and defense, medical, industrial components, data storage, automotive electronics and appliance.

Sales of \$715.2 million were 21% lower in 2009 than in 2008 largely as a result of the global economic crisis as demand from various key markets declined significantly beginning in the fourth quarter 2008 and continued to remain at very low levels into 2009. We believe that there was excess inventory in the supply chain that needed to be worked down when the crisis hit and therefore the demand from our customers on us initially fell further than the decline in consumer spending. Conditions improved in portions of various markets as 2009 progressed, but this improvement was tempered by a softening of defense and medical market sales in the second half of the year. After reaching a near-term low point in the first quarter 2009, order entry and sales grew in each subsequent quarter of the year. Shipping levels in the fourth quarter 2009, however, still remained below the shipping levels in 2008 before the crisis began.

Gross margin and profitability declined significantly in 2009 largely as a result of the fall-off in sales. In response to the decline in sales, we implemented various cost-saving initiatives that helped offset a portion of the negative margin impact of the lower sales volume. Manpower levels were reduced, compensation and benefits were frozen and/or cut and various discretionary spending items were eliminated.

The operating loss was \$19.5 million in 2009 compared to an operating profit of \$28.1 million in 2008. In addition to the impact from the changes in sales volumes and the cost-saving initiatives, profitability in 2009 was affected by an unfavorable non-cash \$4.9 million mark-to-market valuation on a derivative and \$2.1 million of severance and restructuring costs.

In October 2009, we purchased the outstanding stock of Barr Associates, Inc. (Barr) for \$55.2 million in cash. Barr produces precision thin film optical filters used in defense, medical, telecommunications and other markets. The acquisition of Barr, coupled with our existing operations, allows us to provide a broad array of optical filters across a wide band of wavelengths.

We reduced our working capital investments in light of the reduced sales and profitability and, as a result, we generated cash flow from operations of \$41.5 million in 2009. We also limited our capital spending to high priority items; capital spending, excluding amounts reimbursed by the Department of Defense under a government contract, was below the level of depreciation.

Debt totaled \$64.5 million at year-end 2009, an increase of \$22.7 million during the year. The debt-to-debt-plus-capital-ratio was 16% at December, 31, 2009. The increase in debt plus the cash flow from operations and excess cash were used to fund the Barr acquisition and capital expenditures.

RESULTS OF OPERATIONS

(Millions except for per share data)	2009	2008	2007
Net sales	\$715.2	\$909.7	\$955.7
Operating (loss) profit	(19.5)	28.1	84.5
(Loss) income before income taxes	(20.8)	26.1	82.7
Net (loss) income	(12.4)	18.4	53.3
Diluted earnings per share	(0.61)	0.89	2.59

Sales of \$715.2 million in 2009 were \$194.5 million, or 21%, lower than sales of \$909.7 million in 2008, while sales in 2008 were \$46.0 million, or 5%, lower than sales of \$955.7 million in 2007.

Domestic sales declined 19% in 2009 from 2008 after growing 6% in 2008 over 2007. International sales were 25% lower in 2009 than 2008 and 19% lower in 2008 than in 2007.

Sales to all major markets were lower in 2009 than in 2008. Demand from various markets declined significantly as a result of the global economic crisis and the related impact on consumer spending. We believe that the demand level in certain markets initially fell further than the actual decline in consumer spending levels as a result of excess inventory levels in the downstream supply chain. Sales to certain markets also were affected by government spending levels, energy prices and other factors in 2009.

Sales to the *telecommunications and computer market*, our largest market, declined 16% in 2009 from 2008 after growing 19% in 2008 over 2007. Demand levels started to soften in the fourth quarter 2008 and then fell significantly in the first quarter 2009 due to the global economic crisis. By the fourth quarter 2009, demand had improved over the levels from the first quarter 2009 but had not yet returned to the levels prior to the start of the crisis. Demand from the *appliance market* was also severely affected by the economic crisis and our sales into this market declined by over 40% in 2009.

Automotive electronic sales declined at a double digit rate in both 2009 and 2008 from the respective prior years. Shipments into Europe, partially spurred by the lower value of the U.S. dollar, helped offset a portion of the weakness in the U.S. market.

Sales for *defense applications*, which had grown in 2008 over 2007, initially were not affected by the global economic crisis and remained solid for the first half of 2009. However, program funding delays, push outs of orders and other factors reduced demand in the second half of the year and defense sales in 2009 fell below the 2008 level.

Medical market sales were higher in the first half of 2009 than the first half of 2008, but a combination of softer demand and a manufacturing quality issue, which has been resolved, reduced sales in the second half of the year. Medical sales had grown in 2008 over 2007 in part due to the acquisition of Techni-Met in the first quarter 2008.

Sales for oil and gas applications within the *industrial components market* grew in the first three quarters of 2008 over 2007, but then declined in the fourth quarter 2008 due to temporary disruptions to drilling operations in the southern U.S. caused by Hurricane Ike and a decline in energy prices. Demand remained soft in 2009 as a result of the relatively low energy prices and excess inventories in the supply chain.

Sales into the *data storage market* were lower in 2009 from 2008 after declining significantly in 2008 from the very high levels in 2007. See “Segment Disclosures” below for further discussion.

Offsetting a portion of the weakness in our traditional markets was the continued development of various new products and applications for our existing and new markets. One of the key new markets we are targeting for growth is the *energy market*. Each of our major businesses is developing solar and/or alternative energy applications for this growing market and, while still relatively minor, sales into this market improved in 2009 over the 2008 level.

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. Copper prices have been volatile and, while market prices by year-end 2009 were quite high, the average price for 2009 was lower than the average price for 2008. The average price for copper in 2008 was higher than the 2007 average price. Prices for gold and other precious metals increased in the second half of 2009 and for the year were higher on average than in 2008. Precious metal prices were higher in 2008 than in 2007 as well. Ruthenium prices have fallen over the last two years. We estimate that the net metal price impact decreased sales \$9.1 million in 2009 as compared to 2008 and increased sales \$50.7 million in 2008 as compared to 2007.

We implemented various cost-saving initiatives beginning late in the fourth quarter 2008 and throughout the first nine months of 2009 in response to the weakening order entry rate at that time. By the end of 2009, excluding the impact of the Barr acquisition in the fourth quarter 2009, total manpower was reduced by 14% from year-end 2008 levels and 17% from the end of the third quarter 2008. Overtime in the plants was eliminated and regular work hours were reduced in many cases. The Company match for the 401(k) savings plan was first reduced in half and then suspended altogether for the majority of employees. Discretionary spending was reduced and various projects and initiatives were cancelled or delayed. Compensation levels were frozen and then reduced for the majority of

employees; by year-end 2009, the pay reductions were reinstated. These cost-saving initiatives favorably impacted gross margins and selling, general and administrative expenses in 2009. Severance and related costs associated with the headcount reductions totaled \$2.1 million in 2009 and were included in selling, general and administrative expenses on the Consolidated Statement of Income.

We estimate that spending on certain operating costs (excluding materials) and other manufacturing overhead and administrative costs was reduced by approximately 21% in 2009 from the 2008 level.

Gross margin of \$91.4 million was 13% of sales in 2009 compared to \$151.9 million, or 17% of sales, in 2008 and \$196.7 million, or 21% of sales, in 2007. The lower sales volume in 2009 reduced margins by an estimated \$69.5 million from 2008 and was the cause for the overall decline in margins in 2009 from 2008. Production levels were reduced in 2009 (due to the lower sales and a reduction in inventory) which resulted in operating inefficiencies at various facilities that negatively affected margins. The change in product mix was unfavorable in 2009 as compared to 2008 partially due to lower sales of higher margin generating beryllium-containing products in 2009. The 2009 gross margin was also reduced by the cost of a manufacturing quality return, unplanned downtime on a key piece of equipment and inventory valuation adjustments.

The cost-reduction efforts offset a portion of the negative impact of the above items on gross margin in 2009 as operating and overhead manufacturing costs were lower in 2009 than in 2008.

The market price of ruthenium declined from a high of over \$800 per troy ounce in the first quarter 2007 to a low of below \$100 per troy ounce in 2009. Accounting regulations require inventory to be carried at the lower of its cost or market. As a result of the generally falling prices over this time period, we recorded lower of cost or market charges of \$0.7 million in 2009, \$15.2 million in 2008 and \$4.5 million in 2007.

After a rapid increase in the market price of ruthenium late in 2006 and early 2007, we sold products at prices significantly higher than their original material cost, generating an additional \$22.9 million of margin, primarily in the first half of 2007. This benefit did not repeat in 2008 and 2009 as we changed our pricing practices so that our purchase price for ruthenium forms the basis for the price charged to our customers.

In addition to the above items that affected the comparison between the 2008 and 2007 gross margin, the lower sales volume in 2008 reduced margins by an estimated \$21.0 million as compared to 2007. Manufacturing overhead costs were higher in 2008 than in 2007 due to increases in utilities, freight and other items. The margin generated by Techni-Met, improved pricing in portions of the business and a favorable foreign currency translation effect offset a portion of the impact of the decline in volume, changes in product mix and higher overhead costs. Margins were reduced \$5.7 million in 2007 as a result of quality returns from a key customer and related rework and scrap costs.

In the first quarter 2009, we determined that the domestic defined benefit pension plan was curtailed due to the significant reduction in force. As a result of the curtailment and the associated remeasurement, we recorded a \$1.1 million one-time benefit during the first quarter 2009, \$0.8 million of which was recorded against cost of sales and \$0.3 million recorded against selling, general and administrative expenses on the Consolidated Statement of Income. In addition to the one-time benefit, the 2009 annual expense under the plan was reduced by \$1.0 million from the initial projected expense had the plan not been curtailed. The all-in expense on this plan was \$3.2 million in 2009 compared to \$4.8 million in 2008. See "Critical Accounting Policies" below.

Selling, general and administrative expenses (SG&A) were \$89.8 million in 2009 (13% of sales), \$104.5 million in 2008 (11% of sales) and \$110.1 million in 2007 (12% of sales). SG&A expenses declined 14% in 2009 from 2008 after having declined 5% in 2008 from 2007. The lower expense in 2009 as compared to 2008 was mainly due to the cost reduction efforts in light of the sales decline as manpower levels and costs and discretionary spending were cut in 2009. Sales and distribution-related expenses were lower in 2009 than in 2008 as well.

The incentive compensation expense on plans designed to pay in cash was \$1.2 million lower in 2009 than in 2008 and \$8.2 million lower in 2008 than in 2007. The changes in the annual expense between years were caused by the performance of the individual businesses relative to their plans' objectives. Stock-based compensation expense, including the expense for performance restricted shares, stock options, stock appreciation rights and restricted stock, was \$3.5 million in 2009, \$2.6 million in 2008 and \$3.9 million in 2007. The comparison of stock-based

compensation expense between years is affected by changes in plan design, actual performance relative to the plans' objectives, movement in our stock price and other factors.

International SG&A expenses, excluding incentive compensation, were approximately 19% lower in 2009 than in 2008 largely due to the cost reductions efforts and a decline in sales-related expenses. International expenses had increased modestly in 2008 over 2007, mainly as a result of translation rate differences.

Acquisition-related expenses for legal, accounting and due diligence services totaled \$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 acquisition.

Other corporate administrative expenses were down \$5.6 million in 2009 from 2008 in part due to the cost-reduction efforts and the related impact on compensation and benefits. Information technology costs were also lower as were costs for various outside services. In 2008, corporate administrative expenses increased \$3.0 million over 2007 largely due to higher legal, compliance and information technology costs.

In addition to the items noted above, the comparison of the total SG&A expenses between 2008 and 2007 was affected by the inclusion of Techni-Met beginning in the first quarter 2008 and higher retirement costs in 2008.

Research and development expenses (R&D) totaled \$6.8 million in 2009, \$6.5 million in 2008 and \$5.0 million in 2007. R&D expenses were below 1% of sales in each of the last three years, although despite the corporate-wide cost reduction efforts in light of the lower sales volume, we increased our R&D spending slightly in 2009. R&D efforts are focused on developing new products and applications as well as continuing improvements in our existing products.

The **litigation settlement gain** of \$1.1 million in 2008 represents the favorable settlement of a lawsuit, net of legal fees, in which we sought recovery of our rights under a previously signed indemnity agreement.

The litigation gain of \$8.7 million in 2007 resulted from the settlement of a lawsuit against our former insurers in the fourth quarter of that year. We originally filed the lawsuit in order to resolve a dispute over how insurance coverage should be applied to incurred indemnity losses and defense costs. The court previously had issued a summary judgment in our favor in the third quarter 2006 and awarded us damages of \$7.8 million. The defendants did not pay the award at that time and, due to the uncertainty of the appeal process, we did not record the benefits of that award in our Consolidated Financial Statements. Under the terms of the settlement, the insurers agreed to pay us \$17.5 million and to provide enhanced insurance coverage. This enhanced insurance includes occurrence-based coverage for years up to the date of the settlement, including years when we did not have any beryllium-related product liability insurance. We agreed to dismiss our bad faith claim against the insurers, which was scheduled to go to trial in the first quarter 2008, as well as the prior damage award of \$7.8 million.

We applied \$1.1 million of the settlement against amounts recorded on our Consolidated Balance Sheet as recoverable amounts for previously incurred indemnity and defense costs. The remaining \$16.4 million was credited to income on the Consolidated Statement of Income. We incurred \$7.7 million of legal fees pursuing the lawsuit and negotiating the settlement agreement in 2007, yielding a net pre-tax benefit to income of \$8.7 million.

There were no litigation settlement gains in 2009.

Derivative ineffectiveness expense of \$4.9 million was recorded in 2009 on a copper derivative embedded in a debt obligation secured during the year. The derivative serves as an economic hedge to changes in the value of our copper inventories. However, the derivative does not qualify as a hedge for accounting purposes and changes in its fair value must be recorded against income as ineffectiveness. The derivative was in a loss position as of year-end 2009 as a result of an increase in the market price of copper since the derivative's inception. The \$4.9 million was a non-cash expense in 2009.

Derivative ineffectiveness expense of \$0.2 million in 2008 and \$0.1 million in 2007 was due to changes in the fair value of an interest rate swap that did not qualify as a hedge for accounting purposes. This swap was terminated in the fourth quarter 2008.

Other-net expense for each of the last three years is summarized in the following table:

(Millions)	Income (Expense)		
	2009	2008	2007
Foreign currency exchange losses	\$(0.7)	\$ (3.7)	\$(0.6)
Amortization of intangible assets	(4.0)	(3.5)	(1.2)
Metal consignment fees	(3.3)	(4.5)	(2.0)
Directors' deferred compensation	(0.1)	1.2	(0.3)
Loss on sale of business	—	—	(0.3)
All other items	(1.4)	(3.1)	(1.3)
Total	\$(9.5)	\$(13.6)	\$(5.7)

Foreign currency exchange gains and losses result from movements in value of the U.S. dollar against the euro, yen and sterling and the maturity of hedge contracts.

The amortization of intangible assets increased in 2009 over 2008 primarily as a result of the intangible assets acquired with Barr in the fourth quarter 2009 and a full year of amortization of the Techni-Met intangible assets. The increased amortization in 2008 over 2007 was due to the intangible assets purchased as part of the Techni-Met acquisition in the first quarter 2008. See Note E to the Consolidated Financial Statements.

Metal financing fees are a function of the quantity and market price of precious metals held on consignment and the consignment fee rate. The fee was lower in 2009 than in 2008 as a result of a reduction in the quantities of metal on hand. The fee increased in 2008 over 2007 due to the inclusion of Techni-Met's metal requirements under our existing lines beginning in the first quarter 2008.

The income or expense on the directors' deferred compensation plan was a function of the outstanding shares in the plan and movements in the market price of our stock. In the first quarter 2009, the Board of Directors amended the deferred compensation plan, eliminating the directors' ability to transfer their deferral balance between stock and other investment options allowable under the plan. As a result of the amendment, effective with the beginning of the second quarter 2009, the shares being held are no longer marked-to-market against the income statement in accordance with accounting guidelines. Prior to this change, in 2008, the share price decreased, which reduced our liability and created income. In 2007, the share price increased, increasing our liability to the plan and resulting in an expense.

In the first quarter of 2007, we sold substantially all of the operating assets and liabilities of Circuits Processing Technology, Inc. (CPT), a wholly owned subsidiary that manufactures thick film circuits, for \$2.2 million. CPT, which was acquired in 1996, was a small operation with limited growth opportunities. The loss on the sale was approximately \$0.3 million.

Other-net expense also includes bad debt expense, cash discounts, gains and losses on the sale of fixed assets and other non-operating items.

The **operating loss** in 2009 was \$19.5 million compared to an operating profit of \$28.1 million in 2008. This \$47.6 million reduction in profitability was primarily a result of the lower gross margin due to the decline in sales and other factors along with the derivative ineffectiveness loss offset in part by the operating and overhead spending savings from the cost reduction efforts, lower foreign currency exchange losses and other items.

The 2008 operating profit was \$56.4 million less than the record-high operating profit of \$84.5 million generated in 2007. The lower of cost or market charge in 2008 compared to the ruthenium pricing benefit net of the lower of cost or market charge and quality return charge in 2007 and the differences in litigation settlement gain between years accounted for \$35.5 million of the decline in profit. The remaining \$20.9 million decline in profit was due to the margin impact from the lower sales volumes in 2008, increased manufacturing overhead costs, higher amortization expense, foreign currency exchange losses and other factors. Operating profit was 3% of sales in 2008 and 9% of sales in 2007.

Interest expense was \$1.3 million in 2009, \$2.0 million in 2008 and \$1.8 million in 2007. While debt levels and the associated interest expense increased in the fourth quarter 2009 mainly as a result of the acquisition of Barr,

average debt levels for the full year 2009 were lower than in 2008. The average borrowing rate was lower in 2009 than in 2008 as well. The average debt level was higher throughout 2008 than in 2007, primarily due to the Techni-Met acquisition, but the average borrowing rate was lower.

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

(Dollars in millions)	2009	2008	2007
(Loss) income before income taxes	\$(20.8)	\$26.1	\$82.7
Income tax (benefit) expense	(8.4)	7.7	29.4
Effective tax rate	(40.6)%	29.6%	35.6%

The effects of percentage depletion (a tax benefit that results from our mining operations), the production deduction and foreign source income and deductions were major causes of the differences between the effective and statutory rates for all three years. The effect of executive compensation was also a major cause for the difference between the effective and statutory rates in 2008 and 2007.

In 2009, the effective rate was affected by a net \$0.7 million reduction in the tax reserves that was recorded in accordance with accounting guidelines. In 2008, tax reserves were reduced a net \$1.3 million while tax reserves were reduced by an immaterial amount in 2007.

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

The *net loss* was \$12.4 million, or \$0.61 per share diluted, in 2009 compared to net income of \$18.4 million, or \$0.89 per share diluted, in 2008 and \$53.3 million, or \$2.59 per share diluted, in 2007.

Segment Disclosures

The Company has four reportable segments — Advanced Material Technologies and Services, Specialty Engineered Alloys, Beryllium and Beryllium Composites and Engineered Material Systems.

Beginning in the first quarter 2009, the operating results for Zentrix Technologies Inc. (Zentrix), a small, wholly owned subsidiary, are included in the Advanced Material Technologies and Services segment. Previously, Zentrix had been included with the corporate office as part of All Other. We made this change because the Advanced Material Technologies and Services segment management is now responsible for Zentrix and this structure is consistent with our internal reporting and how the Chairman of the Board evaluates the operations. The results for the prior years have been recast to reflect this change. 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 BEM 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 \$9.4 million in 2009 and \$2.9 million in 2008 and an operating profit of \$3.9 million in 2007. The increased loss in 2009 as compared to 2008 was due primarily to the \$4.9 million derivative ineffectiveness expense recorded in 2009, the \$1.1 million litigation settlement gain recorded in 2008, the difference in the directors' deferred compensation between years and differences in the level of costs charged to the other units offset in part by lower corporate spending and other factors.

The change in profitability between 2008 and 2007 was due to a combination of the difference in litigation settlement gains between periods, increased corporate costs, lower charges out to the business units and other factors offset in part by reduced incentive compensation and the difference in the directors' deferred compensation expense.

Advanced Material Technologies and Services

(Millions)	2009	2008	2007
Net sales	\$460.8	\$480.3	\$533.5
Operating profit	22.6	10.8	60.4

Advanced Material Technologies and Services 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, specialty inorganic materials, optics, performance coatings and electronic packages. These products are used in wireless, semiconductor, photonic, hybrid and other microelectronic applications within the telecommunications and computer market. Other key markets for these products include medical, data storage, defense, security and solar energy. An in-house refinery and metal cleaning operations allow for the reclaim of precious metals from internally generated or customers' scrap. Due to the high cost of precious metal products, we emphasize quality, delivery performance and customer service in order to attract and maintain applications. Development of new products and new technologies is key for long-term growth. This segment has domestic facilities in New York, Connecticut, Wisconsin, Massachusetts and California and international facilities in Asia and Europe.

Sales from Advanced Material Technologies and Services of \$460.8 million in 2009 were \$19.5 million, or 4%, lower than sales of \$480.3 million in 2008. Sales in 2008 were 10% lower than sales of \$533.5 million in 2007.

We adjust our selling prices daily to reflect the current cost of the precious and various non-precious metals sold. The cost of the metal is generally a pass-through to the customer and we generate a margin on our fabrication efforts irrespective of the type or cost of the metal used in a given application. Therefore, the cost and mix of metals sold will affect sales but not necessarily the margin dollars generated by those sales. On average, metal prices were higher in 2009 and 2008 than the respective prior years. We estimate that the higher metal prices increased sales by \$5.0 million in 2009 as compared to 2008 and \$45.8 million in 2008 as compared to 2007. This higher metal price pass-through offset a portion of the decline in sales due to lower underlying volumes in both 2009 and 2008.

After a weak first quarter 2009, sales of vapor deposition targets, lids and wire products manufactured at the Buffalo, New York facility for wireless and semiconductor applications improved and were solid the last three quarters of the year. Sales of these products had grown significantly in 2008 over 2007, but were adversely affected by the global economic crisis beginning late in 2008 as key customers pushed orders out in response to the slowdown in consumer spending.

Sales of lids from Thin Film Technology, Inc. (TFT), a wholly owned subsidiary, grew 6% in 2009 over 2008 after growing over 50% in 2008 over 2007. The growth in sales in 2008 was fueled by strong demand from the defense and medical markets and this high level of growth from both markets continued into the first half of 2009. However, a key defense customer lost a major application for its product, resulting in significantly reduced demand for lids from TFT in the second half of 2009. Sales for medical applications remained solid throughout 2009.

Sales of inorganic chemicals and other materials from CERAC, a wholly owned subsidiary, declined in 2009 as demand softened due to the global economic crisis. Demand levels started to improve in the fourth quarter 2009. Sales from CERAC had grown at a double digit rate in 2008 over 2007. CERAC's products are used in optics, security, solar energy and other applications.

Sales of precision precious metal polymer films for the medical market from Techni-Met grew in the first half of 2009 over the first half of the prior year. However, a slight softening of demand coupled with a manufacturing quality issue late in the third quarter resulted in reduced shipments in the fourth quarter and sales for the year being lower than 2008. The manufacturing issue has been resolved and we anticipate that shipments will ramp back up to the level prior to this issue during the first quarter 2010. Techni-Met was acquired in early 2008 and contributed to the growth in sales to the medical market in 2008 over 2007.

Sales of targets manufactured at the Brewster, New York facility for media applications within the data storage market declined by \$3.2 million in 2009 from 2008 after declining \$141.9 million in 2008 from 2007. Media sales grew significantly and quickly in 2007 as a result of our product development efforts allowing us to capture a share of this growing market, particularly as customers were converting over to the perpendicular magnetic recording

technology. However, after a quality issue and a change in material specifications, sales declined in the second half of 2007 from the first half of that year. The ramifications of these and other material supply issues continued and, along with weaker market demand in the second half of 2008 and falling prices, caused sales to decline in 2008. Sales remained soft throughout 2009, although there was some improvement in the fourth quarter.

While the dollar value of media sales was lower in 2009 than in 2008, volumes processed and shipped were actually higher as the sales value was affected by lower metal prices, changes in the metal composition and a shift in material supply arrangements (i.e., the use of customer supplied metal as opposed to metal that we own). The volume decline in 2008 relative to 2007 was also less than the sales decline.

Sales of electronic packages from Zentrix increased 8% in 2009 over 2008 after increasing 2% in 2008 over 2007. Demand levels from Asia improved in the second half of 2009.

The acquisition of Barr added to the sales from Advanced Material Technologies and Services in the fourth quarter 2009. Barr produces thin film optical filters that enable complex technologies in a variety of markets. Barr's products are complementary to the segment's existing product lines, particularly the products manufactured by TFT. Barr and TFT together offer a variety of solutions for optical applications over a wide spectrum of wavelengths.

Advanced Material Technologies and Services generated gross margins of \$68.1 million (15% of sales) in 2009, \$59.6 million (12% of sales) in 2008 and \$103.1 million (19% of sales) in 2007.

Margins grew in 2009 on the lower sales volume largely due to lower of cost or market charges of \$0.7 million in 2009 compared to \$15.2 million in 2008. This \$14.5 million benefit between years was partially offset by an estimated \$8.0 million margin impact from the lower sales volume. The negative volume impact on margins was net of an improvement in margin contribution from TFT and Zentrix in 2009 from 2008. The manufacturing issue in the third quarter and various inventory valuation adjustments reduced margins by an estimated \$1.1 million in 2009. The change in product mix was slightly unfavorable in 2009. Manufacturing overhead costs at the existing facilities were reduced in 2009, but these savings were partially offset by the inclusion of Barr beginning in the fourth quarter. A \$2.6 million sales correction in the first quarter 2008 of an error from 2007 affected the margin comparison between 2009 and 2008 as well.

The \$43.5 million decline in gross margin in 2008 from 2007 was caused largely by the lower sales volumes from the Brewster facility to the data storage market and the \$15.2 million of lower of cost or market charges on ruthenium inventories. Margins were also lower in 2008 as a result of the previously discussed net \$12.7 million benefit (the \$22.9 million benefit from the sale of the low cost ruthenium inventory at higher market prices, the \$4.5 million lower of cost or market charge and the \$5.7 million quality charge) that flowed through this segment's margins in 2007. Manufacturing overhead costs increased \$12.7 million in 2008 over 2007 as a result of the expansion of several facilities, the addition of Techni-Met and other factors. Offsetting a portion of these unfavorable movements was a growth in margins from various portions of the business, including CERAC, TFT and the Buffalo operations. The acquisition of Techni-Met provided a margin benefit in 2008 as well.

SG&A, R&D and other-net expenses from Advanced Material Technologies and Services totaled \$45.5 million (10% of sales) in 2009, \$48.7 million (10% of sales) in 2008 and \$42.6 million (8% of sales) in 2007. Expenses were reduced in 2009 mainly in response to the lower sales volumes. Manpower levels and costs and discretionary spending items were reduced at various facilities during the year.

The comparison of expenses between years was affected by the acquisitions. The decline in expenses in 2009 was net of the \$1.9 million in SG&A expenses incurred by Barr since its acquisition in the fourth quarter 2009. The increase in expenses in 2008 over 2007 was partially due to the \$2.1 million of SG&A and R&D expenses incurred by Techni-Met in 2008 since its acquisition in the first quarter of that year.

Incentive compensation expense increased \$0.1 million in 2009 over 2008 after declining \$1.8 million in 2008 from 2007. R&D costs increased in each of the last two years in order to support the current business and future growth. International SG&A expenses declined \$1.3 million in 2009 over 2008. In 2008, international SG&A expenses grew \$0.5 million over 2007. Corporate charges were lower in 2009 than in 2008 after increasing in 2008 over 2007.

Amortization of intangible assets increased \$0.5 million in 2009 over 2008 largely due to the acquisition of Barr in the fourth quarter 2009. Amortization was \$2.4 million higher in 2008 than 2007 as a result of the intangible assets purchased as part of the Techni-Met acquisition.

Metal financing fees were \$1.2 million lower in 2009 than in 2008 primarily due to a reduction in the average quantity of metal on hand. Metal financing fees increased \$2.5 million in 2008 due to the inclusion of Techni-Met and changes in the market value of the metal.

Operating profit from Advanced Material Technologies and Services was \$22.6 million in 2009, more than double the profit of \$10.8 million in 2008 as a result of the margin improvement and lower expenses. Profit in 2008 was \$49.6 million lower than the profit of \$60.4 million in 2007. The lower profit in 2008 resulted primarily from the fall-off in data storage market sales and the related ruthenium inventory issues. Operating profit was 5% of sales in 2009, 2% in 2008 and 11% in 2007.

Specialty Engineered Alloys

(Millions)	2009	2008	2007
Net sales	\$172.5	\$299.9	\$290.0
Operating (loss) profit	(32.3)	5.8	7.6

Specialty Engineered Alloys manufactures and sells three main product families:

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 telecommunications and computer, 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 by Brush Resources Inc., a wholly owned subsidiary, at its milling operations in Utah from its 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 Beryllium Composites segment. External sales of hydroxide from the Utah operations were less than 4% of Specialty Engineered Alloys' total sales in each of the three most recent years.

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 Specialty Engineered Alloys of \$172.5 million in 2009 were \$127.4 million, or 42%, lower than sales of \$299.9 million in 2008 primarily due to the impact of the global economic crisis on shipments of both strip and bulk products. Sales to all major markets declined at double digit rates in 2009 from the 2008 levels. Sales in 2008 were 3% higher than sales of \$290.0 million in 2007 as a result of improved pricing and mix, the translation effect on foreign currency denominated sales and the pass-through of higher metal prices.

Sales of strip products declined in 2009 and 2008 from the respective prior year while sales of bulk products declined in 2009 from 2008 after increasing in 2008 over 2007.

Demand for strip products from the telecommunications and computer and automotive electronic markets, which was relatively soft during the first three quarters of 2008, declined severely in the fourth quarter 2008 and the first half of 2009 as a result of low consumer spending and excess inventories in the supply chain. As this inventory was worked off and overall market conditions started to improve, demand for strip products increased in the second half of 2009 over the first half of the year. This improvement in demand in the second half of the year was largely for telecommunications applications in Asia and automotive and appliance applications in Europe.

Initially, bulk product volumes were not affected as severely by the global economic crisis as strip products. However, a fall-off in demand from the oil and gas and aerospace markets coupled with high downstream inventory positions within the supply chain led to a significant decline in volumes in 2009. Bulk product sales into the oil and gas market were weak as a result of the soft demand for energy which is keeping the price of oil below the level that would spur significant exploration and production increases. The growth in bulk product sales in 2008 over 2007 was partially due to increased sales for oil and gas applications as a result of higher energy prices during that year. After growing in 2008 over 2007, sales for aerospace applications softened in 2009 due to ongoing deferrals of new aircraft builds and decreased repair and maintenance activities. Some improvement in demand was seen in the second half of 2009 for military and heavy equipment applications as well as plastic mold tooling for the appliance and automotive markets. Bulk products remained well positioned in its markets and we believe sales should grow once market conditions improve.

Strip product volumes (i.e., pounds shipped) were 32% lower in 2009 than 2008 and 13% lower in 2008 than in 2007. Bulk product volumes declined 45% in 2009 from 2008 after growing 6% in 2008 over 2007. Copper prices were lower on average in 2009 than in 2008 and were responsible for an estimated \$14.1 million of the sales decline in 2009 from 2008. Higher copper prices accounted for an estimated \$4.8 million of the sales increase in 2008 over 2007.

The order entry rate was extremely weak in the first half of 2009. However, the rate improved in the second half of 2009, primarily due to increased demand for strip products, and the order entry rate in the fourth quarter 2009 exceeded the rate in the fourth quarter 2008 (although it was still below the rate from the first nine months of 2008). The improvement in the order entry rate continued into the early portion of 2010.

In response to the lower sales level, Alloy Products implemented numerous cost-reduction efforts beginning in the fourth quarter 2008 and continuing into 2009. These efforts included a reduction in force of approximately 200 people in manufacturing, sales and administration by December 2009 from the September 2008 level.

The gross margin on sales by Specialty Engineered Alloys was \$9.0 million in 2009 compared to \$59.3 million in 2008 and \$58.2 million in 2007. The gross margin was 5% of sales in 2009 and 20% of sales in both 2008 and 2007.

The \$50.3 million margin decline in 2009 was primarily due to the \$127.4 million reduction in sales. Production volumes were even lower than sales in 2009 as inventories were worked down throughout the year. The lower production volumes, however, negatively affected margins as a result of increased manufacturing inefficiencies and lower machine utilization rates. In addition, unplanned downtime on a key piece of equipment in the fourth quarter 2009 reduced margins by an estimated \$1.3 million. The change in product mix was unfavorable in 2009 as well. Manufacturing overhead spending, including manpower and utilities, was lower in 2009 than 2008 and helped to mitigate a portion of the negative impact the above items had on margins. Pricing improvements implemented during 2009 also provided a small benefit to margins in the year.

The margin growth in 2008 over 2007 was due to the benefits of improved pricing and mix offset in part by the margin loss on the lower sales volume, higher costs of utilities, freight and certain chemicals and lower production volumes.

Total SG&A, R&D and net-other expenses of \$41.3 million in 2009 were \$12.2 million lower than expenses of \$53.5 million in 2008. Expenses in 2007 totaled \$50.7 million. Expenses were 24% of sales in 2009, 18% of sales in 2008 and 17% of sales in 2007.

The lower expenses in 2009 as compared to 2008 were largely due to the aforementioned cost reduction efforts offset in part by severance costs. Sales-related expenses, including commissions and advertising, were also lower in 2009 than in 2008. Lower incentive compensation and foreign currency exchanges losses contributed to the decline in expenses in 2009 as well.

In the fourth quarter 2009, we implemented a plan to realign the distribution of Alloy Products in the United Kingdom. The plan included the use of an independent distributor and should result in lower overhead costs and improved profitability from that operation in future periods.

The \$2.8 million growth in expenses in 2008 was primarily due to higher foreign currency exchange losses, increased incentive compensation accruals and a higher bad debt expense. R&D efforts and expenses increased slightly as well. These higher costs were partially offset by lower corporate charges in 2008.

Specialty Engineered Alloys generated an operating loss of \$32.3 million in 2009 as a result of the margin decline due to the lower sales volume and other factors offset in part by the cost saving efforts and other expense reductions. Operating profit was \$5.8 million in 2008, down \$1.8 million from the profit of \$7.6 million earned in 2007.

While we did see benefits from a growing order entry rate and from the cost reduction efforts late in the year, we will continue to investigate alternatives to further reduce costs and/or restructure this business in order to improve profitability.

Beryllium and Beryllium Composites

(Millions)	2009	2008	2007
Net sales	\$47.0	\$63.6	\$60.5
Operating profit	2.1	8.4	7.8

Beryllium and Beryllium 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 through Brush Ceramic Products Inc., a wholly owned subsidiary in Tucson, Arizona. Defense and government-related applications, including aerospace, is the largest market for Beryllium and Beryllium Composites, while other markets served include medical, telecommunications and computer, electronics (including acoustics), optical scanning and general industrial markets.

Sales from Beryllium and Beryllium Composites of \$47.0 million in 2009 declined 26% from sales of \$63.6 million in 2008. Sales in 2008 were \$3.1 million, or 5%, higher than sales of \$60.5 million in 2007.

The fall-off in sales in 2009 was largely due to softer demand from the defense market, mainly in the second half of the year. The primary defense platforms for beryllium products are aerospace and missile systems and we began to experience delays in orders for these applications in the third quarter. Funding for orders for various projects was delayed while other orders were pushed out into future periods. We do not believe the decline in defense sales was due to any significant applications being lost to competing materials or technologies. Demand for defense applications has shown improvement in the first quarter of 2010.

Sales from the Fremont facility were 19% lower in 2009 than in 2008, largely due to weaker demand for medical and industrial x-ray window assemblies although sales for assemblies and other beryllium foil products improved modestly in the fourth quarter 2009 over the previous quarters in 2009. We continued our application development work on high-end speaker domes, which is a potential niche market for beryllium materials, during 2009. This product has been well-received thus far and we anticipate slow but steady growth in this market in 2010.

Sales of ceramics declined 42% in 2009 from 2008 as the global economic crisis had a major impact on a key ceramic customer's business. We anticipate that business levels at this customer will ramp up at modest rates in the first half of 2010.

Shipments for defense applications improved in the last three quarters of 2008 after a sluggish first quarter and were the primary cause for the increase in Beryllium and Beryllium Composites' sales in 2008 over 2007. Sales for medical and industrial x-ray applications were down slightly in 2008 from 2007 while sales for acoustic applications grew modestly in 2008. Sales of new products, including applications using near net shape technologies, also contributed to the sales improvement in 2008 over 2007. Ceramic sales grew 3% in 2008 over 2007.

Sales from Beryllium and Beryllium Composites during 2007 included shipments under two distinct, non-repeating programs — the James Webb Space Telescope (JWST) for NASA and the Joint European Torus (JET), a nuclear fusion experimental reactor, totaling \$3.1 million. These projects were completed in 2007 and shipments did not repeat in subsequent years.

Beryllium and Beryllium Composites generated a gross margin of \$11.1 million (24% of sales) in 2009, \$19.6 million (31% of sales) in 2008 and \$20.1 million (33% of sales) in 2007. The main cause of the decline in the gross margin dollars and rate in 2009 was the significant fall-off in sales. The margin impact of the lower volumes was partially mitigated by a reduction in direct and overhead manufacturing costs, including manpower, supplies and utility costs. Material input costs increased in 2009 over 2008 and had a negative impact on margins. The change in product mix was slightly unfavorable in 2009.

The \$0.5 million decline in margins in 2008 as compared to 2007 resulted from an unfavorable product mix shift (which resulted from the completion of the JWST and JET projects and increased sales for applications that typically carry lower margins), higher metal feedstock costs and an increase in manufacturing overhead costs partially offset by the margin benefit of the higher sales volume.

SG&A, R&D and other-net expenses were \$9.0 million (19% of sales) in 2009, \$11.2 million (18% of sales) in 2008 and \$12.2 million (20% of sales) in 2007. The lower expense in 2009 was due to the cost-reduction initiatives and reduced incentive compensation. These benefits were partially offset by an increase in R&D expenses.

The \$1.0 million decline in expenses in 2008 was due to lower incentive expense and corporate charges. Selling and other administrative costs were unchanged while R&D increased slightly as a result of higher activity levels.

Operating profit from Beryllium and Beryllium Composites declined \$6.3 million, from \$8.4 million in 2008 to \$2.1 million in 2009. The reduction in profit in 2009 resulted from the margin impact from the lower sales volume offset in part by the cost reductions. The operating profit in 2008 was a 7% improvement over the \$7.8 million operating profit generated in 2007 as the reduction in incentive compensation and other expenses more than offset the lower gross margin. Operating profit was 5% of sales in 2009 and 13% of sales in 2008 and 2007.

Engineered Material Systems

(Millions)	2009	2008	2007
Net sales	\$34.7	\$65.9	\$70.9
Operating (loss) profit	(2.5)	5.9	4.7

Engineered Material Systems 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 brazing alloy to be applied to a base metal only where it is needed, reducing the material cost to the customer as well as providing design flexibility. Major applications for these products include connectors, contacts and semiconductors while the largest markets are automotive electronics, telecommunications and computer and data storage. The energy and defense and medical electronic markets are smaller but offer further growth opportunities. Engineered Material Systems are manufactured at our Lincoln, Rhode Island facility.

Sales from Engineered Material Systems totaled \$34.7 million in 2009, a decline of 47% from sales of \$65.9 million in 2008. Sales from all major product lines were lower in 2009 than in 2008. Sales declined 7% in 2008 from sales of \$70.9 million in 2007.

The significant decline in sales in 2009 was caused by the global economic crisis as demand from all of this segment's key markets dropped quickly and severely beginning in the fourth quarter 2008. Sales reached their near-term low point in the first quarter 2009, having declined to less than one-third of sales in the first quarter 2008. Sales slowly began to recover, growing each quarter in 2009 and sales in the fourth quarter 2009 were more than double sales from the first quarter.

Sales of materials for disk drive applications, a new product that had grown into a sizable portion of Engineered Material Systems' total sales in 2008 and 2007, fell to an immaterial level in the first quarter 2009. Shipment levels then grew over the balance of the year helping to fuel the quarter-to-quarter improvement in 2009. The improvement during 2009 also resulted from increased shipments to the automotive electronics market, particularly to Europe which was partially due to the weaker dollar, as well as the development of new products and applications.

The lower sales in 2008 as compared to 2007 were primarily due to weak demand from the automotive electronics market. Improved demand from the European automotive market in the first half of 2008 had helped to offset a portion of the weakness in the U.S. market, but the European market weakened in the second half of that year.

The order entry rate improved over the last three quarters of 2009 from the extremely low levels from the first quarter of the year. By the fourth quarter 2009 and into early first quarter 2010, demand had strengthened across all major markets and order entry had stabilized at a level above the total 2009 sales but still below the 2008 sales level.

The gross margin on Engineered Material Systems' sales totaled \$3.5 million in 2009, \$13.5 million in 2008 and \$13.0 million in 2007. As a percent of sales, gross margin fell to 10% of sales in 2009 after improving to 21% of sales in 2008 from 18% in 2007.

The lower margin dollars and rate in 2009 were due to the severe decline in sales during the year. The change in product mix was also unfavorable in 2009. In response to the lower sales, labor and other direct manufacturing costs were reduced approximately 26% in 2009 from the 2008 level. Production schedules were revised to allow for manufacturing to be campaigned on various equipment lines in order to offset a portion of the inefficiencies created by the low production volumes. Manufacturing overhead costs, including manpower, maintenance and utilities, were also reduced by \$1.6 million in 2009 from the 2008 level.

The margin grew in 2008 despite the lower sales due to reduced manufacturing and commodity costs. In addition, yields and other manufacturing efficiencies improved beginning in the fourth quarter 2007 and continued during 2008. A portion of these manufacturing improvements resulted from capital investments completed at that time.

SG&A, R&D and other-net expenses of \$6.0 million from Engineered Material Systems were \$1.6 million lower than in 2008. In addition to the spending reductions, the savings resulted from lower incentive expense and corporate charges. In 2008, these expenses were \$0.7 million lower than in 2007 due to a reduction in incentive expense and corporate charges.

Engineered Material Systems generated an operating loss of \$2.5 million in 2009 compared to an operating profit of \$5.9 million (9% of sales) in 2008 and \$4.7 million (7% of sales) in 2007. The segment was profitable in the second half of 2009.

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.

The Advanced Material Technologies and Services segment has operations in Singapore, Taiwan, the Philippines, China, Ireland and the Czech Republic. These facilities provide a combination of light manufacturing, finishing operations and distribution services.

Brush International has service centers in Germany, Japan and Singapore that primarily focus on the finishing and distribution of materials from Specialty Engineered Alloys while also providing additional local support to portions of our other businesses.

We realigned the operating activities at Brush International's service center in England in the fourth quarter 2009. A portion of the distribution of products into England has been outsourced while the balance will be managed by other Company facilities.

We also have branch sales offices and other operations in various countries, including China, Korea and Taiwan, and we utilize an established network of independent distributors and agents throughout the world. Approximately 11% of our workforce is based overseas.

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

(Dollars in millions)	2009	2008	2007
Asia	\$163.9	\$197.5	\$283.4
Europe	73.5	115.3	110.8
Rest of world	11.8	20.8	19.9
Total	\$249.2	\$333.6	\$414.1
Percent of total sales	35%	37%	43%

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

The lower international sales in 2009 were primarily due to the global economic crisis and the resulting fall-off in demand, particularly from the telecommunications and computer market. Sales to Asia declined 17% in 2009 from the 2008 levels while sales to Europe fell 36%. The decline in international sales in 2008 from the high level in 2007 was primarily due to the previously discussed decline in sales of ruthenium targets to the data storage market in Asia. Asian sales declined 30% while European sales grew 4% in 2008.

Telecommunications and computer, automotive electronics, appliance (primarily in Europe) and data storage are the largest international markets for our products. Our market share is smaller in the overseas markets than it is domestically and, given the macro-economic growth potential for the international economies, including the continued transfer of U.S. business to overseas locations, the international markets may present greater long-term growth opportunities. We believe that a large portion of the long-term international growth will come from Asia.

Sales from the European and certain Asian operations are denominated in the local currency. 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, Brush Wellman Inc., is a defendant 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 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, claim loss of consortium.

The following table summarizes the associated activity with beryllium cases.

	December 31,		
	2009	2008	2007
Total cases pending	4	9	9
Total plaintiffs (including spouses)	8	36	31
Number of claims (plaintiffs) filed during period ended	0(2)	1(6)	0(0)
Number of claims (plaintiffs) settled during period ended	3(16)	0(0)	1(1)
Aggregate cost of settlements during period ended (dollars in thousands)	\$ 850	\$ —	\$ 100
Number of claims (plaintiffs) otherwise dismissed	2(14)	1(1)	3(22)

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 cases and intends to contest the suits vigorously. 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 the litigation pending against our subsidiaries and us, 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 pending beryllium case or additional adverse media coverage could encourage the commencement of additional similar litigation. We are unable to estimate our potential exposure to unasserted claims.

Based upon currently known facts and assuming collectibility of insurance, we do not believe that resolution of the current and 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. As of December 31, 2009, one purported class action was pending.

The balances recorded on the Consolidated Balance Sheets associated with beryllium litigation were as follows:

(Millions)	December 31,	
	2009	2008
Asset (liability)		
Reserve for litigation	\$(0.6)	\$(2.0)
Insurance recoverable	0.3	1.7

The reserve and the recoverable changed by equal amounts in 2009 due to changes in the outstanding cases. The \$0.9 million payment to settle three cases in 2009 was fully insured.

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 from operations of \$41.5 million generated in 2009 was \$35.3 million lower than the cash flow from operations of \$76.8 million in 2008. The decline was primarily due to the net loss in 2009 plus differences in the change in various working capital balances, including receivables and inventory, and deferred taxes. Cash flow from operations in 2008 improved \$25.9 million from the cash flow from operations of \$50.9 million in 2007 despite the decline in net income in that year as a result of changes in working capital levels and the benefits of depreciation and amortization.

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 balances totaled \$12.3 million at year-end 2009 compared to \$18.5 million at year-end 2008. A portion of the cash on hand, increased debt and the cash flow from operations were used to fund the acquisition of Barr and

capital expenditures during the year. Cash declined \$13.2 million during 2008. Cash was used along with additional borrowings and the cash flow from operations to fund the acquisition of Techni-Met, capital expenditures and the repurchase of shares during that year.

Accounts receivable of \$84.0 million at December 31, 2009 was \$3.9 million, or 4%, lower than the receivable balance of \$87.9 million at December 31, 2008. The receivable balance declined despite sales in the fourth quarter 2009 being higher than sales in the fourth quarter 2008 due to an improvement in collections. The days sales outstanding (DSO), a measure of the average time period to collect receivables, improved by approximately five days as of the end of 2009 from the end of 2008.

Accounts written off to bad debts were lower in 2009 than in 2008 and were relatively minor. Bad debts had increased by a modest amount in 2008 over 2007 due to the bankruptcy filing of a customer who purchased scrap from one of our operations. 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.

Accounts receivable declined \$9.5 million, or 10%, in 2008 as a result of lower sales volumes offset in part by a slow down in the DSO.

Other receivables of \$11.1 million were outstanding as of year-end 2009 compared to \$3.4 million from year-end 2008. 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. The 2009 receivable also included a \$0.9 million advance of a legal settlement for which we were reimbursed in full by our insurance provider in the first quarter 2010. The 2008 receivable included \$1.4 million for the final purchase price adjustment on the Techni-Met acquisition; we received this payment in the first quarter 2009.

Inventories totaled \$130.1 million as of December 31, 2009, a decline of \$26.6 million, or 17%, from inventories of \$156.7 million as of year-end 2008. Inventory turns, a measure of how efficiently inventory is utilized, improved as of year-end 2009 as compared to year-end 2008. This improvement occurred primarily in the second half of the year as inventory positions were held fairly constant while sales increased.

The majority of the inventory reduction in 2009 was within the Specialty Engineered Alloys segment as inventory was adjusted to the lower business levels. Total pounds in inventory were down 24% from 2008 year-end, with the finished goods inventories being reduced further than raw materials and work-in-process due in part to mild changes in distribution channels. Inventories within Engineered Material Systems declined over the course of 2009, but started to climb in the fourth quarter in response to the improved order entry. Their 2009 year-end inventory was down approximately 10% from year-end 2008.

Inventories as of year-end 2009 within Advanced Material Technologies and Services were essentially unchanged from the prior year-end as various reductions from the existing facilities were offset by the inventory acquired with Barr. Beryllium and Beryllium Composites' inventory was also relatively unchanged in 2009.

Total inventories were \$8.5 million, or 5%, lower at year-end 2008 than year-end 2007. Inventories at the Brewster facility within the Advanced Material Technologies and Services segment declined in response to the lower sales volumes and as a result of the \$15.2 million lower of cost or market adjustment. This decline was partially offset by an increase in inventories within the Specialty Engineered Alloys segment. Those inventories grew approximately 13% in 2008 due to increased mining activity at the Utah operations and as a result of additional purchases of copper late in the fourth quarter to allow for portions of the production activity at the Elmore facility to be campaigned for scheduling and efficiency purposes in the fourth quarter 2008 and first quarter 2009. Inventory turns were approximately 10% slower at year-end 2008 than at year-end 2007.

The price of gold and copper increased significantly during the fourth quarter 2009. The price of these and other metals we use, including nickel, can be quite volatile. Changes in market prices can lead to changes in the value of our inventory on a first-in, first-out method (FIFO). The impact of the changing metal prices was partially offset by the use of the last-in, first-out (LIFO) valuation method for these metals, limiting the impact on the

fluctuation in inventory carrying value on the balance sheet as the LIFO process will result in the current prices being charged to the income statement. See “Critical Accounting Policies” below.

Prepaid expenses, including insurance, income taxes, property taxes, rent, manufacturing supplies and other items, were \$28.0 million as of year-end 2009 compared to \$23.7 million as of year-end 2008. The 2009 change was due to differences in the timing of payments and a variety of other factors. Prepaid expenses increased \$6.0 million in 2008, primarily due to an increase in prepaid income taxes.

Other assets of \$42.0 million as of December 31, 2009 were \$7.6 million higher than the balance of \$34.4 million as of December 31, 2008. Intangible assets acquired as part of the Barr purchase totaled \$12.2 million while the amortization of existing and acquired intangible assets totaled \$4.5 million in 2009. The insurance recoverable account declined \$1.4 million as a result of the resolution of various cases in 2009.

Other assets increased \$22.6 million in 2008 primarily due to the intangible assets acquired with Techni-Met as well as an increase to the insurance recoverable account offset in part by the amortization of the existing and acquired intangible assets.

Accounts payable totaling \$36.6 million as December 31, 2009 was \$8.6 million higher than the \$28.0 million balance as of December 31, 2008. The increase was due to the timing of payments, the inclusion of Barr and a higher level of operating activities. The 2008 year-end balance was \$0.9 million higher than the prior year-end balance of \$27.1 million.

Accrued salaries and wages of \$16.3 million at year-end 2009 were \$6.3 million lower than at year-end 2008. Accrued salaries and wages declined \$11.6 million during 2008. The changes in the balance in both years were due to changes in the incentive compensation accruals, manpower levels and other related factors.

Unearned revenue, which is a liability representing billings to customers in advance of the shipment of product, was \$0.4 million as of December 31, 2009 and \$0.1 million as of December 31, 2008.

Other Long-term Liabilities

Other long-term liabilities of \$49.3 million as of year-end 2009 were \$29.9 million higher than the \$19.4 million balance at year-end 2008. Other long-term liabilities totaled \$11.6 million as of year-end 2007. Long-term unearned income increased \$28.2 million during 2009 and \$8.0 million during 2008 for reimbursements received under a government funded capital expenditure program. See “Critical Accounting Policies” below. Other long-term liabilities also increased \$1.9 million in 2009 for the estimated fair value of the earn-out liability for the potential payments to be made to the sellers of Barr based upon Barr’s future performance. The legal reserve declined \$1.3 million in 2009 as a result of a settlement and other changes to the outstanding cases.

Other increases in 2008, including a growth in the legal reserve and rent accruals, were offset by a reduction to the long-term portion of the incentive compensation accrual in that year.

Retirement and Post-employment Benefits

The liability for retirement and post-employment benefits was \$82.4 million at December 31, 2009, a decrease of \$14.8 million from the balance of \$97.2 million at December 31, 2008.

Included within these balances is the recorded liability for the domestic defined benefit pension of \$44.2 million as of December 31, 2009 and \$58.7 million as of December 31, 2008. The projected benefit obligation for this plan, which covers the majority of our domestic employees, was \$149.9 million as of year-end 2009 versus \$137.5 million at year-end 2008. The market value of the plan assets grew from \$78.8 million as of year-end 2008 to \$105.7 million as of year-end 2009. This \$26.9 million growth was due to actual investment gains of \$15.4 million and Company contributions of \$18.3 million offset in part by benefit and expense payments totaling \$6.8 million. In 2009, we increased the pension liability and recorded a net \$0.4 million pre-tax charge to other comprehensive income (OCI), a component of shareholders’ equity, as a net result of a change in the discount rate, the plan performance during the year, the curtailment recorded in the first quarter and other factors.

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 \$30.9 million as of December 31, 2009 and \$32.8 million at December 31, 2008. The plan expense was \$2.2 million in 2009 and \$2.4 million in 2008.

Brush International's subsidiary in Germany has an unfunded retirement plan for its employees while its 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, depletion and amortization was \$31.9 million in 2009, \$33.8 million in 2008 and \$23.9 million in 2007. The decline in 2009 from 2008 was due to reduced mine amortization at our Utah operations offset in part by an increase in the intangible asset amortization due to the Barr acquisition. The increase in expense in 2008 was due in part to additional mine activity in that year and the acquisition of intangible assets as part of the Techni-Met purchase.

Capital Expenditures

A summary of capital expenditures over the past three years is as follows:

(Millions)	<u>2009</u>	<u>2008</u>	<u>2007</u>
Capital expenditures	\$44.2	\$35.5	\$26.4
Mine development	<u>0.8</u>	<u>0.4</u>	<u>7.1</u>
Subtotal	45.0	35.9	33.5
Reimbursement for spending under government contract	<u>28.2</u>	<u>8.0</u>	<u>3.5</u>
Net spending	\$16.8	\$27.9	\$30.0

We have a contract with the U.S. Department of Defense (DoD) for the design and development of a new facility for the production of primary beryllium. The total cost of the project is estimated to be approximately \$90.3 million; we will contribute land, buildings, research and development, technology and ongoing operations valued at approximately \$23.2 million to the project. The DoD will reimburse us for the balance of the project cost. All of the funds required to complete the project are in the President's approved defense budget, but are still subject to final House and Senate appropriations approvals. Reimbursements from the DoD are recorded as unearned income and included in other long-term liabilities on the Consolidated Balance Sheets. We began construction of the facility early in the third quarter 2008 and we anticipate it will be completed in the second half of 2010. 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.

We reduced the level of capital spending, net of the reimbursements from the DoD, by approximately 40% of the spending rate in 2008 and 44% from the 2007 spending rate due to the decline in profitability in 2009. The net capital spending was below the level of depreciation in both 2009 and 2008.

Capital spending by Advanced Material Technologies and Services was \$4.5 million in 2009 and \$7.9 million in 2008. Spending in 2009 included a micro-slitter, clean room and other investments into the Techni-Met facility designed to expand our capabilities in order to further penetrate the medical and solar energy markets. Capital spending in 2008 included the completion of the new facility in China and the expansion of the Brewster facility. Spending in both years included the implementation of new software systems.

Specialty Engineered Alloys' capital spending totaled \$3.8 million in 2009 compared to \$9.1 million in 2008 as spending was reduced in 2009 due to the operating loss within this segment. Spending in both years was primarily to replace or upgrade discrete pieces of equipment at the Ohio and Pennsylvania facilities. Included in the capital spending totals for this segment were mine development costs of \$0.8 million in 2009 and \$0.4 million in 2008. We anticipate that mine development spending will increase significantly in 2010 as we will be opening a new bertrandite mine pit in Utah.

In addition to the new beryllium plant, capital spending within the Beryllium and Beryllium Composites segment included an investment in new coating technologies and expenditures to support the development of acoustic applications.

Capital spending within Engineered Material Systems was \$0.4 million in 2009 and \$1.1 million in 2008. Spending was limited to high priority items in 2009 due to the decline in profitability. The installation of a new efficient high technology work center at the Lincoln facility was completed in 2008.

Approximately 79% of the capital spending in 2009 was for capacity expansions, largely the new beryllium facility. Maintenance capital items accounted for an estimated 15% of the spending while new technology projects accounted for the remaining 6%.

In addition to the above capital expenditure totals, we acquired the outstanding capital stock of Barr for \$55.2 million in cash in the fourth quarter 2009. Preliminary goodwill assigned to the transaction totaled \$31.3 million. The purchase price is subject to final adjustment based upon resolution of matters defined in the purchase agreement. The sellers also have an opportunity to earn additional payments based upon Barr's performance over the next five years.

In the first quarter 2008, we acquired the operating assets of Techni-Met for \$87.5 million. We received \$1.4 million from escrow in the first quarter 2009 as the final purchase adjustment under the terms of the agreement. Subsequent to the acquisition, we transferred the precious metal portion of Techni-Met's inventory to our existing consignment lines and received its fair value of \$22.9 million back from the financial institution. Goodwill assigned to the transaction totaled \$13.9 million.

Debt

Outstanding debt totaled \$64.5 million as of December 31, 2009, an increase of \$22.7 million over the prior year end. Total debt had declined \$2.8 million over the first three quarters of 2009 as a result of the cash flow from operations, but then increased \$25.5 million in the fourth quarter in order to partially fund the acquisition of Barr. Short-term debt, which included U.S. dollar, metal and foreign currency denominated borrowings, totaled \$56.2 million while long-term debt totaled \$8.3 million as of year-end 2009.

We have a \$240.0 million revolving credit agreement that matures in the fourth quarter 2012. It is a committed facility and is comprised of sub-facilities for revolving loans, swing line loans, letters of credit and foreign currency denominated borrowings. The agreement is subject to a maximum availability calculation. We were in compliance with all of our debt covenants as of December 31, 2009.

Total outstanding debt of \$41.8 million as of year-end 2008 was \$6.3 million higher than the outstanding debt as of year-end 2007. Short-term debt of \$30.6 million increased \$5.7 million during 2008. Long-term debt grew \$0.6 million during 2008 and stood at \$11.2 million as of year-end 2008. Debt increased in the first quarter 2008 primarily due to the acquisition of Techni-Met and then decreased each quarter over the balance of the year as a result of the cash flow from operations.

Shareholders' Equity

Shareholders' equity decreased \$7.2 million from \$347.1 million as of year-end 2008 to \$339.9 million as of year-end 2009. Equity decreased by \$6.6 million in 2008. The comprehensive loss, which includes net income (loss), changes in derivative fair values and the pension liability that are charged directly to equity and the change in the cumulative translation adjustment, was \$11.2 million in 2009 and \$4.9 million in 2008. See Note L to the Consolidated Financial Statements.

Proceeds from the exercise of approximately 32,000 options totaled \$0.5 million in 2009. In 2008, we received \$0.2 million of cash for the exercise of approximately 12,000 options.

In the third quarter 2008, our Board of Directors adopted a share buyback program authorizing the repurchase of up to one million shares of stock. The primary purpose of the program is to offset the dilution caused by stock-based compensation plans. In 2008, we had repurchased 300,000 shares at a cost of \$5.0 million under this plan. There were no repurchases under this plan in 2009.

Equity was also affected by stock-based compensation expense, the tax benefits on the exercise of options and other factors in both 2009 and 2008.

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. See Item 7A, “Quantitative and Qualitative Disclosures about Market Risk”. The notional value of the off-balance sheet inventory was \$98.7 million at December 31, 2009, a decrease of \$5.5 million from the \$104.2 million outstanding at December 31, 2008. The decline was due to a reduction in the ounces on hand offset in part by an increase in metal prices.

Contractual Obligations

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

(Millions)	2010	2011	2012	2013	2014	Thereafter	Total
Long-term debt	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 8.3	\$ 8.3
Non-cancelable lease payments	7.8	7.3	4.5	3.9	3.6	20.3	47.4
Pension plan contributions	8.1	—	—	—	—	—	8.1
Purchase commitments	1.8	—	—	—	—	—	1.8
Total	\$ 17.7	\$ 7.3	\$ 4.5	\$ 3.9	\$ 3.6	\$ 28.6	\$ 65.6

Consistent with our prior practice, we anticipate that we will renegotiate a new debt agreement prior to the maturation of the current revolving credit agreement in 2012; however, we cannot guarantee that we will be able to enter into a replacement facility with similar terms as the existing facility. Outstanding borrowings under the revolving credit agreement classified as short-term debt totaled \$11.4 million as of December 31, 2009. See Note F to the Consolidated Financial Statements for additional debt information.

The lease payments represent payments under non-cancelable leases with initial lease terms in excess of one year as of December 31, 2009. See Note G to the Consolidated Financial Statements for further leasing details.

The pension plan contribution of \$8.1 million in the above table refers to the domestic defined benefit plan. Contributions to the plan are designed to comply with ERISA guidelines 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. The amount shown in the table represents our best estimate of the 2010 contribution as of early in 2010.

The purchase commitments of \$1.8 million are for capital equipment to be acquired in 2010.

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 from operations totaled \$169.2 million in 2007 through 2009 while capital expenditures, net of amounts reimbursed by the government, totaled \$74.7 million.

A summary of the outstanding debt, cash balances and available borrowing capacity as of the end of each of the last three years is as follows:

(Millions)	December 31,		
	2009	2008	2007
Total outstanding debt	\$ 64.5	\$ 41.8	\$ 35.5
Cash	12.3	18.5	31.7
Debt net of cash	52.2	23.3	3.8
Available borrowing capacity	46.3	218.2	217.0

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

As the chart indicates, debt net of cash increased \$48.4 million from the end of 2007 to the end of 2009. During this time period, we acquired Barr for \$55.2 million and Techni-Met for a net outlay of \$63.1 million (the purchase price less the cash received for the reimbursement of their gold against the consignment line). The increase in debt was less than the net outlay for these two acquisitions as a result of the cash flow from operations being in excess of capital spending.

The available borrowing capacity in the chart represents the 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. One of these covenants restricts the borrowing capacity to a multiple of the twelve-month trailing earnings before interest, income taxes, depreciation and amortization and other adjustments. The available borrowing capacity is lower as of year-end 2009 than it was at year-end 2008 because of the effect the lower earnings in 2009 had on this covenant. We had an operating loss of \$11.4 million in the first quarter 2009. By the end of the first quarter 2010, the first quarter 2009 results will not be included in the covenant calculation. All else equal, our borrowing capacity will increase in the first quarter 2010 to the extent that our earnings in the first quarter 2010 improve over the first quarter 2009 loss. The available unused capacity is also lower at year-end 2009 due to the higher level of outstanding borrowings.

The debt-to-total-debt-plus-equity ratio, a measure of balance sheet leverage, increased to 16% as of December 31, 2009 from 11% as of December 31, 2008 and 9% as of December 31, 2007. The increase in 2009 was largely due to the additional borrowings to finance the Barr acquisition. Management believes that this level of leverage is within the long-term average for the Company. There are no mandatory long-term debt repayments due in 2010.

The unused and available capacity under the consignment lines totaled approximately \$57.2 million as of year-end 2009.

The working capital ratio, which compares current assets excluding cash to current liabilities excluding debt, was 3.2 to 1.0 as of year-end 2009 compared to 3.8 to 1.0 as of year-end 2008.

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

After acquiring Barr in the fourth quarter 2009, we acquired all of the outstanding capital stock of Academy Corporation (Academy) for \$22.7 million in cash in the first quarter 2010. Academy provides precious and non-precious metals and refining services to a number of technically demanding end-use applications, including architectural glass, solar energy, medical and electronics. The acquisition was financed with a combination of cash on hand and borrowings under the revolving credit agreement. Immediately after the acquisition, we transferred Academy's precious metals onto our existing consignment lines and received its estimated market value of \$7.2 million back from the financial institution.

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 \$5.6 million at December 31, 2009 and \$6.3 million at December 31, 2008. Spending against the reserve, primarily for clean-up costs for the Company's former headquarters building that previously was also used to house light manufacturing operations and R&D laboratories, totaled \$1.0 million in 2009. Payments against the reserve totaled \$0.3 million in 2008. The reserve balance was adjusted in 2009 for the addition of a small project and changes in estimates on existing projects. See Note J to the Consolidated Financial Statements.

ORE RESERVES

Brush Resources' reserves of beryllium-bearing bertrandite ore are located in Juab County, Utah. An ongoing drilling program has generally added to proven reserves over time. 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, principally at greater depths, but prospects for commercial recovery are indeterminable. Ore dilution that occurs during mining is approximately seven percent. The ore is processed at Brush Resources' extraction facility in Utah. Approximately 87% of the beryllium in ore is recovered in the extraction process. We augment our proven reserves of bertrandite ore through the purchase of imported beryl ore. This ore, which is approximately 4% beryllium, is also processed at the Utah facility.

We use computer models to estimate ore reserves, which are subject to economic and physical evaluation. Development drilling can also affect the total ore reserves to some degree. 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. We own approximately 95% of the proven reserves, with the remaining reserves leased. Based upon average production levels in recent years, proven reserves would last over one hundred years. Ore reserves classified as possible are excluded from the following table.

	2009	2008	2007	2006	2005
Proven bertrandite ore reserves at year-end (thousands of dry tons)	6,425	6,454	6,531	6,550	6,601
Grade % beryllium	0.266%	0.266%	0.266%	0.267%	0.268%
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)	39	64	52	48	38
Grade % beryllium, diluted	0.330%	0.321%	0.321%	0.352%	0.316%

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. See Note J to the Consolidated Financial Statements.

Certain legal claims are 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 2009, defense and indemnity costs exceeded 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 may be 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 OCI. The actuaries adjust certain assumptions to reflect changes in demographics and other factors, including mortality rates and employee turnover, as warranted. Management annually reviews other key 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. These adjustments may then lead to a higher or lower expense in a future period.

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 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 5.875% as of December 31, 2009 and 6.15% as of December 31, 2008.

Our pension plan investment strategies are governed by a policy adopted by the Retirement Plan Review Committee of the Board of Directors. 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 maintained the expected rate of return on plan asset assumption at 8.25% as of December 31, 2009, unchanged from December 31, 2008. After generating a loss in 2008, the pension plan investments generated a return in excess of the 8.25% assumption in 2009. The expected rate of return assumption relates to the long term and we believe that an 8.25% return over the long term is reasonable. Should the assets earn an average return less than 8.25% over time, in all likelihood the future pension expense would increase. Investment earnings in excess of 8.25% would tend to reduce the future expense.

If the expected rate of return assumption was changed by 25 basis points (0.25%) and all other pension assumptions remained constant, the 2010 projected pension expense would change by approximately \$0.3 million. If the December 31, 2009 discount rate were reduced by 25 basis points and all other pension assumptions remained constant, then the 2010 projected pension expense would increase by approximately \$0.4 million.

Cash contributions and funding requirements are governed by ERISA and IRS guidelines and not by accounting standards. These guidelines are subject to change from time to time. As previously indicated, based upon these guidelines, current assumptions and estimates and our pension plan objectives, we estimate a cash contribution of approximately \$8.1 million will be made in 2010.

The pension liability is recalculated at the measurement date (December 31 of each year) and any adjustments to this account and other comprehensive income within shareholders' equity 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. Copper prices, after reaching very high levels in the second quarter 2008, declined significantly and quickly in the second half of that year, only to steadily increase throughout 2009. Gold prices increased significantly in the fourth quarter 2009. The year-end price for gold has increased over the respective prior year-end price for three straight years. The prices for nickel and other precious metals we use have been quite volatile in recent years as well.

Where possible, such changes in material costs are generally reflected in selling price adjustments. The prices of labor and other factors of production, including supplies and utilities, generally increase with inflation. 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 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 a 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, 2009 level, a 100 basis point change in the annual inflation rate would cause a \$0.5 million change 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, including the alternative minimum tax credit, 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.

A deferred tax valuation allowance of \$0.2 million associated with a foreign subsidiary was reversed back to income in 2009. We had valuation allowances of \$1.7 million associated with state deferrals and \$2.0 million associated with foreign deferrals (primarily net operating loss carryforwards) recorded against our net deferred tax assets of \$19.5 million as of December 31, 2009.

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

Unearned revenue. Billings under long-term sales contracts 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 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 criteria are met. 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.

Long-term unearned income. Expenditures for capital equipment to be reimbursed under government contracts are recorded in construction in process. Reimbursements for those expenditures are recorded in unearned income, a liability on the balance sheet. The total cost of the assets to be constructed may include 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 reduces 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 current Title III project and the related unearned income balance totaled \$39.7 million as of December 31, 2009. This total could rise to between \$65.0 and \$70.0 million when the project is completed depending upon the actual cost of the facility to be constructed, government approval of the project funding, the timing of the construction of the facility and the portion of the cost to be retained by us. The plant is expected to be completed and placed in service during 2010.

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. If a cash flow hedge is deemed effective, changes in its fair value are 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 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. Hedge contracts are secured and approved by senior financial managers at our corporate office. The level of derivatives outstanding 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 secure contracts through financial institutions that are already part of our bank group.

See Note H to the Consolidated Financial Statements and Item 7A, "Quantitative and Qualitative Disclosures About Market Risk".

OUTLOOK

We entered 2010 with mixed economic signals. We had an improving order entry trend from portions of our key markets, including telecommunications and computer, but we remained concerned that the high unemployment rate in the U.S. will have a negative impact on consumer spending levels and our order entry rate going forward. Portions of certain other markets, including the oil and gas and aerospace sectors of the industrial components market, were starting to show signs of recovery as of early in the first quarter 2010. Medical sales, after a relatively soft first quarter 2010, should improve during the balance of 2010. Demand for defense applications has shown improvement in the first quarter of 2010.

Sales in 2010 will benefit from a full year of owning Barr, which was acquired in the fourth quarter 2009, as well as the acquisition of Academy in the first quarter 2010. These two operations complement and expand the products offered by our Advanced Material Technologies and Services segment and should offer a variety of synergies as we progress through 2010 and 2011. Due to the product mix in these businesses and the high metal content in sales, the gross margin as a percent of sales from these acquisitions may be lower than our historic gross margin percent.

In addition to growing sales, our cost control efforts will be key to improving profitability in 2010. While resources will need to be added back to some degree depending upon the increase in production requirements, our challenge will be to limit those additions and to leverage the existing resources and investments through improved efficiencies.

The new beryllium facility is scheduled to be completed in 2010 with product testing and qualification to occur in the second half of the year. While qualifying a facility of this size can be a difficult endeavor, once operational, the facility will provide a long-term stable source of high-quality beryllium metal.

Capital investments will continue to be closely managed in 2010. We will concentrate our spending on high-return and high priority projects. Total spending in 2010 should be higher than 2009, with the amount of the increase somewhat dependent upon the level of cash flow generated from operations and the available debt capacity under our existing bank lines.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

While the global credit crisis and the resulting economic downturn affected our sales and margins in 2009, it has not had a significant impact on our credit lines, our ability to conduct financial transactions or the valuation of financial instruments as of early in the first quarter 2010. However, this can potentially change quickly as there have been sudden and dramatic changes in the financial standing of a number of firms during this crisis. 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 been developing contingency plans accordingly.

Our credit lines are with banks that thus far have remained solvent throughout the crisis. While there were minor changes to the participants in some of our credit lines during 2009, these changes did not materially affect the cost or availability of our credit. Our total borrowing capacity under secured lines, that cannot be terminated prior to maturity as long as we continue to meet our debt covenants, was in excess of current needs as of December 31, 2009. The availability of credit for foreign currency hedging purposes thus far has been unaffected by the crisis.

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.

The only financial instruments subject to fair value considerations on our December 31, 2009 balance sheet are:

- foreign currency derivative financial instruments that hedge our currency exposure in the normal course of business;
- an embedded copper derivative that provides an economic hedge of our inventory carrying cost; and
- investments held by our directors deferred compensation plan trust.

We are exposed to precious metal and commodity price, interest rate and foreign exchange rate differences. While the degree of exposure varies from year to year, our methods and policies designed to manage these exposures have remained fairly consistent. We attempt to minimize the effects of these 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, precious metals 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 on a 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 use increase by 20% from the prices on December 31, 2009, the additional pre-tax cost to us as a result of an increase in the consignment fee would be approximately \$0.5 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 use a larger proportion of the credit line. 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 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.

We also use base metals, including 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 cost and the pass-through to our customers, resulting in higher or lower margins in a given period.

We use ruthenium in the manufacture of one of our family of products. Ruthenium is not a widely used or traded metal and, therefore, there is no established efficient market for derivative financial instruments that could be used to effectively hedge the ruthenium price exposure. Generally, our pricing practice with respect to ruthenium products is to establish the selling price on 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 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. As a result of market price fluctuations, we recorded lower of cost or market charges totaling \$0.7 million in 2009 and \$15.2 million in 2008 on portions of our inventory. The market price of ruthenium increased in the fourth quarter 2009 and the carrying cost of our inventory was approximately 46% lower than the market price at year-end 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; we did not have any derivatives in place to hedge the interest rate exposure as of December 31, 2009. 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 amount or make-up of the outstanding debt as of December 31, 2009, a 200 basis point movement upwards in the interest rates would increase our annual interest expense by \$0.9 million.

Portions of our international operations sell products priced in foreign currencies, mainly the euro, yen and sterling, 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 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.

The notional value of the outstanding currency contracts was \$13.1 million as of December 31, 2009. If the dollar weakened 10% against the currencies we have hedged from the December 31, 2009 exchange rates, the reduced gain and/or increased loss on the outstanding contracts as of December 31, 2009 would reduce pre-tax profits by approximately \$1.3 million in 2010. 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 \$0.1 million at December 31, 2009, indicating that the average hedge rates were slightly favorable compared to the actual year-end market exchange rates.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Financial Statements

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Management's Report on Internal Control Over Financial Reporting

The management of Brush Engineered Materials Inc. 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). Brush Engineered Materials Inc. 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.

Brush Engineered Materials Inc. and subsidiaries' management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2009. 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, 2009, the Company's internal control over financial reporting is effective.

Management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include an assessment of the internal control over financial reporting of Barr Associates, Inc., which is included in the 2009 consolidated financial statements of the Company. We did not assess the effectiveness of internal control over financial reporting at Barr Associates, Inc. because we did not believe we had adequate time to conduct an assessment of the internal control over financial reporting in the period between the consummation date of the acquisition and the date of management's assessment. Barr Associates, Inc. constituted \$65.8 million of total assets as of December 31, 2009 and approximately \$6.4 million and \$0.2 million of net sales and net loss, respectively, for the year ended December 31, 2009.

The effectiveness of our internal control over financial reporting as of December 31, 2009 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

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Brush Engineered Materials Inc.

We have audited Brush Engineered Materials Inc. and subsidiaries' internal control over financial reporting as of December 31, 2009, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Brush Engineered Materials Inc. 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 the 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.

As indicated in the accompanying Management's Report on Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Barr Associates, Inc. which is included in the 2009 consolidated financial statements of Brush Engineered Materials Inc. and subsidiaries and constituted \$65.8 million of total assets as of December 31, 2009 and approximately \$6.4 million and \$0.2 million of net sales and net loss, respectively, for the year ended December 31, 2009. Our audit of internal control over financial reporting of Brush Engineered Materials Inc. and subsidiaries also did not include an evaluation of the internal control over financial reporting of Barr Associates, Inc.

In our opinion, Brush Engineered Materials Inc. and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, 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, 2009 and 2008, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2009 of Brush Engineered Materials Inc. and subsidiaries and our report dated March 5, 2010 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Cleveland, Ohio
March 5, 2010

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Brush Engineered Materials Inc.

We have audited the accompanying consolidated balance sheets of Brush Engineered Materials Inc. and subsidiaries as of December 31, 2009 and 2008, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2009. 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 Brush Engineered Materials Inc. and subsidiaries at December 31, 2009 and 2008, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2009, 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.

As discussed in Note A to the consolidated financial statements, the Company changed its method of accounting for business combinations with the adoption of the guidance originally issued in FASB Statement No. 141(R), *Business Combinations* (codified in FASB ASC Topic 805, *Business Combinations*) effective January 1, 2009. Also, as discussed in Note P to the consolidated financial statements, the Company changed its method of accounting for uncertain tax positions with the adoption of the guidance originally issued in FASB Interpretation No. 48, *Accounting for Uncertainty in Income Taxes — an Interpretation of FASB Statement No. 109* (codified in FASB ASC Topic 740, *Income Taxes*).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Brush Engineered Material Inc. and subsidiaries' internal control over financial reporting as of December 31, 2009, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 5, 2010 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Cleveland, Ohio
March 5, 2010

Brush Engineered Materials Inc. and Subsidiaries
Years Ended December 31, 2009, 2008 and 2007

Consolidated Statements of Income

(Thousands except per share amounts)	2009	2008	2007
Net sales	\$715,186	\$909,711	\$955,709
Cost of sales	623,764	757,836	759,037
Gross margin	91,422	151,875	196,672
Selling, general and administrative expense	89,762	104,523	110,127
Research and development expense	6,771	6,522	4,992
Litigation settlement gain	—	(1,059)	(8,699)
Derivative ineffectiveness	4,892	171	121
Other — net	9,482	13,647	5,666
Operating (loss) profit	(19,485)	28,071	84,465
Interest expense — net	1,299	1,995	1,760
(Loss) income before income taxes	(20,784)	26,076	82,705
Income tax (benefit) expense:			
Currently payable	1,636	1,563	14,120
Deferred	(10,065)	6,156	15,300
	(8,429)	7,719	29,420
Net (loss) income	\$ (12,355)	\$ 18,357	\$ 53,285
Net (loss) income per share of common stock — basic	\$ (0.61)	\$ 0.90	\$ 2.62
Weighted-average number of shares of common stock outstanding — basic	20,191	20,335	20,320
Net (loss) income per share of common stock — diluted	\$ (0.61)	\$ 0.89	\$ 2.59
Weighted-average number of shares of common stock outstanding — diluted	20,191	20,543	20,612

See Notes to Consolidated Financial Statements.

Brush Engineered Materials Inc. and Subsidiaries
Years Ended December 31, 2009, 2008 and 2007

Consolidated Statements of Cash Flows

(Dollars in thousands)	2009	2008	2007
Cash flows from operating activities:			
Net (loss) income	\$ (12,355)	\$ 18,357	\$ 53,285
Adjustments to reconcile net (loss) income to net cash provided from operating activities:			
Depreciation, depletion and amortization	31,939	33,826	23,880
Amortization of deferred financing costs in interest expense	430	378	416
Stock-based compensation expense	3,484	2,552	3,932
Derivative financial instruments ineffectiveness	4,892	171	121
Deferred tax (benefit) expense	(10,065)	6,156	15,300
Changes in assets and liabilities net of acquired assets and liabilities:			
Decrease (increase) in accounts receivable	10,045	16,513	(8,471)
Decrease (increase) in other receivables	(7,678)	7,885	(11,263)
Decrease (increase) in inventory	34,162	12,897	(13,269)
Decrease (increase) in prepaid and other current assets	(4,606)	4,713	(3,913)
Increase (decrease) in accounts payable and accrued expenses	(754)	(11,890)	(4,926)
Increase (decrease) in unearned revenue	319	(2,456)	2,255
Increase (decrease) in interest and taxes payable	5,456	(14,074)	(2,306)
Increase (decrease) in long-term liabilities	(16,607)	1,960	(775)
Other — net	2,796	(176)	(3,322)
Net cash provided from operating activities	41,458	76,812	50,944
Cash flows from investing activities:			
Payments for purchase of property, plant and equipment	(44,173)	(35,515)	(26,429)
Payments for mine development	(808)	(421)	(7,121)
Reimbursement for capital spending under government contract	28,200	8,017	3,472
Payments for purchase of business less cash received	(54,107)	(86,052)	—
Proceeds from transfer of inventory to consignment line	—	22,915	—
Proceeds from sale of business	—	—	2,150
Proceeds from sale of property, plant and equipment	3	—	323
Other investments — net	75	66	47
Net cash (used in) investing activities	(70,810)	(90,990)	(27,558)
Cash flows from financing activities:			
Proceeds from issuance (repayment) of short-term debt	25,778	4,870	(3,607)
Proceeds from issuance of long-term debt	25,700	46,200	16,082
Repayment of long-term debt	(28,600)	(45,600)	(26,392)
Deferred financing costs	(126)	(352)	(825)
Repurchase of common stock	—	(4,999)	—
Issuance of common stock under stock option plans	497	243	4,961
Tax benefit from the exercise of stock options	53	455	2,751
Net cash provided from (used in) financing activities	23,302	817	(7,030)
Effects of exchange rate changes on cash and cash equivalents	(243)	177	(270)
Net change in cash and cash equivalents	(6,293)	(13,184)	16,086
Cash and cash equivalents at beginning of year	18,546	31,730	15,644
Cash and cash equivalents at end of year	\$ 12,253	\$ 18,546	\$ 31,730

See Notes to Consolidated Financial Statements.

Brush Engineered Materials Inc. and Subsidiaries
December 31, 2009 and 2008

Consolidated Balance Sheets

(Dollars in thousands)	2009	2008
Assets		
Current assets		
Cash and cash equivalents	\$ 12,253	\$ 18,546
Accounts receivable (less allowance of \$1,397 for 2009 and \$1,051 for 2008)	83,997	87,878
Other receivables	11,056	3,378
Inventories	130,098	156,718
Prepaid expenses	28,020	23,660
Deferred income taxes	14,752	4,199
Total current assets	280,176	294,379
Related-party notes receivable	90	98
Long-term deferred income taxes	4,873	9,944
Property, plant and equipment	665,361	635,266
Less allowances for depreciation, depletion and amortization	(437,595)	(428,012)
Property, plant, and equipment — net	227,766	207,254
Other assets	42,014	34,444
Goodwill	67,034	35,778
Total Assets	\$ 621,953	\$ 581,897
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt	\$ 56,148	\$ 30,622
Current portion of long-term debt	—	600
Accounts payable	36,573	28,014
Salaries and wages	16,292	22,568
Taxes other than income taxes	763	1,132
Other liabilities and accrued items	27,027	21,431
Unearned revenue	432	113
Income taxes	2,459	—
Total current liabilities	139,694	104,480
Other long-term liabilities	49,276	19,356
Retirement and post-employment benefits	82,354	97,168
Long-term income taxes	2,329	3,028
Deferred income taxes	136	163
Long-term debt	8,305	10,605
Shareholders' equity		
Serial preferred stock, no par value; 5,000,000 authorized shares, none issued	—	—
Common stock, no par value 60,000,000 authorized shares; issued shares of 26,800,000 in 2009 and 26,707,000 in 2008	173,776	170,597
Retained earnings	321,974	334,329
Common stock in treasury, 6,566,000 shares in 2009 and 6,598,000 shares in 2008	(111,370)	(110,865)
Other comprehensive income (loss)	(46,684)	(47,801)
Other equity transactions	2,163	837
Total shareholders' equity	339,859	347,097
Total Liabilities and Shareholders' Equity	\$ 621,953	\$ 581,897

See Notes to Consolidated Financial Statements.

Brush Engineered Materials Inc. and Subsidiaries
Years Ended December 31, 2009, 2008 and 2007

Consolidated Statements of Shareholders' Equity

(Dollars in thousands)	Common Stock	Retained Earnings	Common Stock In Treasury	Other Comprehensive Income (Loss)	Other Equity Transactions	Total
Balances at January 1, 2007	\$155,552	\$264,100	\$(105,765)	\$ (23,320)	\$ 433	\$291,000
Net income	—	53,285	—	—	—	53,285
Foreign currency translation adjustment	—	—	—	1,624	—	1,624
Derivative and hedging activity, net of tax benefit of \$2,181	—	—	—	(4,049)	—	(4,049)
Pension and post-employment benefit adjustment, net of taxes of \$1,794	—	—	—	1,169	—	1,169
Comprehensive income	—	—	—	—	—	52,029
Impact from adoption of FIN 48	—	(1,413)	—	—	—	(1,413)
Proceeds from exercise of 296,000 shares under option plans	4,961	—	—	—	—	4,961
Income tax benefit from exercise of stock options	2,751	—	—	—	—	2,751
Stock-based compensation expense	3,932	—	—	—	—	3,932
Other equity transactions	151	—	187	—	116	454
Balances at December 31, 2007	167,347	315,972	(105,578)	(24,576)	549	353,714
Net income	—	18,357	—	—	—	18,357
Foreign currency translation adjustment	—	—	—	2,305	—	2,305
Derivative and hedging activity, net of taxes of \$51	—	—	—	97	—	97
Pension and post-employment benefit adjustment, net of tax benefit of \$13,126	—	—	—	(25,627)	—	(25,627)
Comprehensive loss	—	—	—	—	—	(4,868)
Proceeds from exercise of 12,000 shares under option plans	243	—	—	—	—	243
Income tax benefit from exercise of stock options	455	—	—	—	—	455
Repurchase of 300,000 shares	—	—	(4,999)	—	—	(4,999)
Stock-based compensation expense	2,552	—	—	—	—	2,552
Other equity transactions	—	—	(288)	—	288	—
Balances at December 31, 2008	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 32,000 shares under option plans	497	—	—	—	—	497
Income tax benefit from exercise of stock options	53	—	—	—	—	53
Stock-based compensation expense	3,484	—	—	—	—	3,484
Other equity transactions	(855)	—	(505)	—	1,326	(34)
Balances at December 31, 2009	\$173,776	\$321,974	\$(111,370)	\$ (46,684)	\$ 2,163	\$339,859

See Notes to Consolidated Financial Statements.

Brush Engineered Materials Inc. and Subsidiaries

Notes to Consolidated Financial Statements

Note A —Significant Accounting Policies

Organization: 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 telecommunications and computer, aerospace and defense, medical, industrial components, data storage, automotive electronics and appliance. The Company has four reportable segments:

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

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

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

Engineered Material Systems manufactures clad inlay and overlay metals, precious and base metal electroplated systems and other related products.

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 Brush Engineered Materials Inc. and its subsidiaries. All of the Company's subsidiaries are wholly owned as of December 31, 2009. Inter-company 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 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:

	<u>Years</u>
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

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.

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.

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 under long-term sales contracts 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.

Advertising Costs: The Company expenses all advertising costs as incurred. Advertising costs were \$0.4 million in 2009, \$1.0 million in 2008 and \$1.0 million in 2007.

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 2009 consolidated financial statement presentation.

New Pronouncements: The Financial Accounting Standards Board (FASB) issued Statement No. 157, “Fair Value Measurements”, in September 2006, codified within ASC 820 — Fair Value Measurements and Disclosures. The statement defines fair value, establishes a framework for measuring fair values and expands disclosures about fair value measurements. The statement emphasizes that fair value is a market-based measurement, not an entity-specific measurement and it should include an assumption about risk, the impact of any restrictions on the use of the asset and other factors. It revises disclosures to focus on the inputs used to measure fair value and the effects of the measurement on earnings for the period. The provisions of this statement apply to derivative financial instruments among other assets and liabilities. The statement was effective for fiscal years beginning on or after November 15, 2007. The Company adopted this statement as required and its adoption did not have a material impact on the Consolidated Financial Statements.

The FASB issued Statement No. 160, “Non-controlling Interests in Consolidated Financial Statements, an amendment of ARB No. 51”, in December 2007, codified within ASC 810 — Consolidation. The statement establishes accounting and reporting standards for a non-controlling interest in a subsidiary and for the deconsolidation of a subsidiary. It clarifies that a non-controlling interest should be classified as a separate component of equity. Among other items, it also changes how income attributable to the parent and the non-controlling interest are presented on the consolidated statement of income. The statement was effective for fiscal years beginning on or after December 15, 2008. The Company adopted this statement as required in 2009 and its adoption did not impact the Consolidated Financial Statements.

The FASB issued Statement No. 141 (Revised 2007), “Business Combinations”, in December 2007, codified within ASC 805 — Business Combinations. The statement requires that purchase accounting be used for all business combinations and that an acquirer be identified for every combination. It requires the acquirer to recognize acquired assets, liabilities and non-controlling interests at their fair values. It also requires that costs incurred to affect the transaction as well as any expected, but not obligated, restructuring costs be expensed and not accounted for as a component of goodwill or part of the business combination. The statement revises the accounting for deferred taxes, research and development costs and other items associated with business combinations. The statement was effective for fiscal years beginning on or after December 15, 2008. The Company adopted this statement as required in 2009 and used the provisions of this statement to account for the assets and liabilities of the acquisition completed in 2009 and the transaction-related costs.

The FASB issued Statement No. 161, “Disclosures about Derivative Instruments and Hedging Activities — an amendment of FASB Statement No. 133”, in March 2008, codified within ASC 815 — Derivatives and Hedging. The statement expands the disclosures of Statement No. 133 in order to enhance the users’ understanding of how and why an entity uses derivatives, how derivative instruments and the related hedged items are accounted for and how derivative instruments and related hedged items affect the entity’s financial position, financial performance and

cash flows. The statement requires qualitative disclosures about hedging objectives and strategies, quantitative disclosures of the fair value of and the gains and losses from derivatives and disclosures about credit-risk related features in derivatives. The statement was effective for fiscal years beginning after November 15, 2008. The Company adopted this statement as required in 2009. The adoption did not impact the Consolidated Financial Statements other than the required additional disclosures.

The FASB issued Statement No. 165, “Subsequent Events”, in May 2009, codified within ASC 855 — Subsequent Events. The statement defines the period after the balance sheet date during which management shall evaluate transactions for potential recognition or disclosure in the financial statements, the circumstances in which an entity shall recognize a subsequent event in its financial statements and the disclosures an entity shall make about subsequent events. The statement was effective for interim or annual periods ending after June 15, 2009. The Company adopted the statement as required and its adoption did not impact the Consolidated Financial Statements other than the required additional disclosures.

The FASB issued Staff Position (FSP) No. FAS 142-3, “Determination of the Useful Life of Intangible Assets”, in April 2008, codified within ASC 350 — Intangibles — Goodwill and Other. The FSP amends the factors to be considered when developing renewal or extension assumptions used to determine the useful life of existing intangible assets. The Company adopted this FSP as required and its adoption did not have a material impact on the Consolidated Financial Statements.

Note B — Acquisitions

In October 2009, one of the Company’s subsidiaries 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. Barr employs approximately 280 people at three leased facilities.

The purchase price was financed with a combination of cash on hand and borrowings under the Company’s 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, which was recorded in other long-term liabilities at its fair value of \$1.9 million. A condensed balance sheet depicting the preliminary amounts assigned to the acquired assets and liabilities as of the acquisition date is as follows:

(Dollars in thousands)	Asset (Liability)
Current assets	\$ 14,441
Finite-lived intangible assets	12,200
Property, plant and equipment	7,330
Other assets	54
Goodwill	31,256
Current liabilities	(3,147)
Long-term liabilities	(2,974)
Deferred income taxes	(3,995)
Total purchase	\$ 55,165

The above assets and liabilities, including the potential earn-out, may be revised pending the finalization of the appraisal and other valuation analyses. Barr generated sales of \$6.4 million and a pre-tax loss of \$0.4 million in 2009 since its acquisition date. The pre-tax loss included the amortization of the preliminary purchase price

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inventory step-up of \$0.6 million. Assuming the acquisition of Barr had occurred on January 1, 2008, the pro forma effect on selected line items from the Company's Consolidated Statement of Income would be as follows:

(Dollars in thousands except for per share amounts)	Pro Forma Results (Unaudited)	
	2009	2008
Sales	\$748,059	\$953,914
(Loss) income before income taxes	(18,625)	31,453
Net (loss) income	(10,952)	21,852
Diluted earnings per share	\$ (0.54)	\$ 1.06

In February 2008, one of the Company's subsidiaries acquired the operating assets of Techni-Met of Windsor, Connecticut for \$86.5 million in cash, including acquisition fees. Techni-Met produces precision precious metal coated flexible polymeric films used in a variety of high end applications, including diabetes diagnostic test strips. Techni-Met sources the majority of its precious metal requirements from other operations within the Company's Advanced Material Technologies and Services segment. The \$86.5 million purchase price was net of \$1.4 million received back from escrow in February 2009 based upon the final agreed-upon balances under the terms of the purchase agreement. The \$1.4 million was recorded in other receivables on the December 31, 2008 Consolidated Balance Sheets. A condensed balance sheet depicting the final amounts assigned to the acquired assets and liabilities as of the acquisition date is as follows:

(Dollars in thousands)	Asset (Liability)
Precious metal inventory	\$ 22,915
Other current assets	8,739
Finite-lived intangible assets	26,200
Property, plant and equipment	15,000
Goodwill	13,879
Current liabilities	(222)
Total purchase	<u>\$ 86,511</u>

The Company financed the acquisition with a combination of cash on hand and borrowings under the revolving credit agreement. Subsequent to the purchase, the Company transferred Techni-Met's precious metal inventory to the existing consignment lines and received its market value of approximately \$22.9 million back from the financial institution.

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 and Services 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:

(Dollars in thousands)	December 31,	
	2009	2008
Principally average cost:		
Raw materials and supplies	\$ 38,740	\$ 41,468
Work in process	119,698	139,552
Finished goods	38,950	50,579
Gross inventories	197,388	231,599
Excess of average cost over LIFO inventory value	67,290	74,881
Net inventories	<u>\$130,098</u>	<u>\$156,718</u>

Average cost approximates current cost. Gross inventories accounted for using the LIFO method totaled \$123.4 million at December 31, 2009 and \$154.8 million at December 31, 2008. The liquidation of LIFO inventory layers reduced cost of sales by \$1.9 million in 2009 and \$0.4 million in 2008.

Lower of cost or market charges reduced net inventories by \$0.7 million in 2009 and \$15.2 million in 2008.

Note D —Property, Plant and Equipment

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

(Dollars in thousands)	December 31,	
	2009	2008
Land	\$ 8,690	\$ 8,729
Buildings	114,114	111,239
Machinery and equipment	460,068	452,702
Software	25,884	24,570
Construction in progress	50,918	25,455
Allowances for depreciation	(435,416)	(420,790)
	224,258	201,905
Mineral resources	5,029	5,029
Mine development	658	7,542
Allowances for amortization and depletion	(2,179)	(7,222)
	3,508	5,349
Property, plant and equipment — net	<u>\$ 227,766</u>	<u>\$ 207,254</u>

Depreciation expense was \$27.9 million in 2009, \$30.3 million in 2008 and \$22.7 million in 2007.

Note E — Intangible Assets**Assets Acquired**

The Company acquired the following intangible assets in 2009:

(Dollars in thousands)	<u>Amount</u>	<u>Weighted-average Amortization Period</u>
Customer relationship	\$ 9,900	9.5 Years
Technology	1,700	3.0 Years
Trade name	600	2.0 Years
License	200	17.0 Years
Deferred financing costs	126	1.0 Years
Total assets subject to amortization	<u>\$12,526</u>	8.3 Years
Goodwill	<u>\$31,256</u>	Not Applicable

The customer relationship, technology and trade name intangible assets and the goodwill were acquired as part of the fourth quarter 2009 purchase of the capital stock of Barr Associates, Inc. and their values may be revised pending the finalization of the appraisal and other valuation analyses.

Assets Subject to Amortization

The cost, accumulated amortization and net book value of intangible assets subject to amortization as of December 31, 2009 and 2008 and the amortization expense for each year then ended is as follows:

(Dollars in thousands)	2009	2008
Deferred financing costs		
Cost	\$ 4,437	\$ 4,311
Accumulated amortization	(3,170)	(2,740)
Net book value	1,267	1,571
Customer relationships		
Cost	34,550	24,650
Accumulated amortization	(6,721)	(4,013)
Net book value	27,829	20,637
Technology		
Cost	11,120	9,420
Accumulated amortization	(2,025)	(1,054)
Net book value	9,095	8,366
Patents		
Cost	690	690
Accumulated amortization	(690)	(690)
Net book value	—	—
Customer contract		
Cost	283	283
Accumulated amortization	(283)	(283)
Net book value	—	—
Licenses		
Cost	420	220
Accumulated amortization	(167)	(118)
Net book value	253	102
Non-compete contracts		
Cost	500	500
Accumulated amortization	(479)	(229)
Net book value	21	271
Trade name		
Cost	600	—
Accumulated amortization	(58)	—
Net book value	542	—
Total		
Cost	\$ 52,600	\$40,074
Accumulated amortization	(13,593)	(9,127)
Net book value	\$ 39,007	\$30,947
Aggregate amortization expense	\$ 4,466	\$ 3,900

The aggregate amortization expense is estimated to be \$5.9 million in 2010, \$5.6 million in 2011, \$5.1 million in 2012, \$4.2 million in 2013 and \$4.2 million in 2014. Intangible assets other than goodwill are included in other assets on the Consolidated Balance Sheets.

Assets Not Subject to Amortization

The Company's only intangible asset not subject to amortization is goodwill. A reconciliation of the goodwill activity for 2009 and 2008 is as follows:

(Dollars in thousands)	2009	2008
Balance at the beginning of the year	\$35,778	\$21,899
Current year acquisitions	31,256	13,879
Balance at the end of the year	<u>\$67,034</u>	<u>\$35,778</u>

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

The goodwill acquired in 2008 was deductible for tax purposes while the goodwill acquired in 2009 was not.

Note F —Debt

A summary of long-term debt follows:

(Dollars in thousands)	December 31,	
	2009	2008
Revolving credit agreement	\$ —	\$ 2,300
Variable rate demand bonds — final installment paid in 2009	—	600
Variable rate industrial development revenue bonds payable in 2016	8,305	8,305
	8,305	11,205
Current portion of long-term debt	—	(600)
Total	<u>\$ 8,305</u>	<u>\$10,605</u>

Maturities on long-term debt instruments as of December 31, 2009 are as follows:

2010	\$ —
2011	—
2012	—
2013	—
2014	—
Thereafter	8,305
Total	<u>\$8,305</u>

The Company has a \$240.0 million revolving credit facility with six financial institutions that is comprised of sub-facilities for short and long-term loans, letters of credit and foreign borrowings. The agreement, which expires in November 2012, is subject to a calculation of maximum availability. The credit agreement also provides for an uncommitted incremental facility whereby, under certain circumstances, the Company may be able to borrow additional terms loans in an aggregate amount not to exceed \$50.0 million. At December 31, 2009, the maximum availability under this facility was \$51.1 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, 2008, there was \$2.3 million outstanding against the foreign borrowing sub-facility at an average rate of 3.90%. This borrowing was retired in 2009. At December 31, 2009 there was \$24.7 million outstanding against the letters of credit sub-facility.

The Company pays a variable commitment fee that resets quarterly (0.15% as of December 31, 2009) 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, 2009.

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.

(Dollars in thousands)	December 31, 2009			December 31, 2008		
	Total	Outstanding	Available	Total	Outstanding	Available
Domestic	\$ 51,101	\$ 11,418	\$ 39,683	\$211,466	\$ —	\$211,466
Foreign	11,303	435	10,868	16,794	10,052	6,742
Precious metal	50,862	44,295	6,567	20,570	20,570	—
Total	<u>\$113,266</u>	<u>\$ 56,148</u>	<u>\$ 57,118</u>	<u>\$248,830</u>	<u>\$ 30,622</u>	<u>\$218,208</u>

While the available borrowings under the individual existing credit lines total \$57.1 million, the covenants in the credit agreement restrict the aggregate available borrowings to \$46.3 million as of December 31, 2009.

The domestic line is committed and includes all sub-facilities in the \$240.0 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. In 2009, the Company added a new precious metal line which includes the ability to consign copper. The average interest rate on short-term debt was 2.49% and 2.75% as of December 31, 2009 and 2008, respectively.

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 0.36% to 1.05% in 2009 and from 1.00% to 8.11% in 2008.

In 1994, the Company re-funded its \$3.0 million industrial development revenue bonds into variable rate demand bonds, which were retired in 2009. The variable rate ranged from 0.62% to 1.12% in 2009 and from 1.04% to 10.00% during 2008.

Note G —Leasing Arrangements

The Company leases warehouse and manufacturing space, and manufacturing and computer equipment under operating leases with terms ranging up to 25 years. Rent expense amounted to \$8.4 million, \$7.6 million, and \$7.9 million, during 2009, 2008, and 2007, respectively. The future estimated minimum lease payments under non-cancelable operating leases with initial lease terms in excess of one year at December 31, 2009, are as follows: 2010 — \$7.8 million; 2011 — \$7.3 million; 2012 — \$4.5 million; 2013 — \$3.9 million; 2014 — \$3.6 million and thereafter — \$20.3 million.

The Company has an operating lease for one of its major production facilities. This facility is owned by a third party and cost approximately \$20.3 million to build. Occupancy of the facility began in 1997. Lease payments for the facility continue through 2011 with options for renewal. The estimated minimum payments are included in the preceding paragraph. The facility lease is subject to certain restrictive covenants including leverage, fixed charges and annual capital expenditures.

Note H —Fair Value Information and Derivative Financial Instruments

The Company measures and records financial instruments at their fair value. A fair value 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 — 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, 2009:

		Fair Value Measurements		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
(Dollars in thousands)				
Description	Total			
Financial Assets				
Directors' deferred compensation investments	\$ 596	\$ 596	\$ —	\$ —
Foreign currency forward contracts	220	—	220	—
Total	<u>\$ 816</u>	<u>\$ 596</u>	<u>\$ 220</u>	<u>\$ —</u>
Financial Liabilities				
Directors' deferred compensation liability	\$ 596	\$ 596	\$ —	\$ —
Foreign currency forward contracts	105	—	105	—
Embedded copper derivative	4,892	—	4,892	—
Total	<u>\$5,593</u>	<u>\$ 596</u>	<u>\$ 4,997</u>	<u>\$ —</u>

The Company uses a market approach to value the assets and liabilities for outstanding derivative contracts in the table above. These contracts are valued using a market approach which incorporates quoted market prices at the balance sheet date. The carrying values of the other working capital items and debt on the Consolidated Balance Sheet approximate their fair values as of December 31, 2009.

The Company uses derivative contracts to hedge portions of its foreign currency exposures and also used derivatives to hedge a portion of its precious metal exposures in 2009. 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, sterling 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 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.

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. Hedge contracts are typically layered in at different times for a specified exposure period in order to minimize the impact of rate movements.

The total exchange loss, which includes realized and unrealized items, was \$0.7 million in 2009, \$3.7 million in 2008 and \$0.6 million in 2007.

Precious Metals. The Company maintains the majority of its precious metal inventory 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 of 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 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.

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.

The following table summarizes the notional amount and the fair value of the Company's outstanding derivatives as of December 31, 2009 and 2008:

(Dollars in thousands)	December 31, 2009		December 31, 2008	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Asset (liability)				
Foreign currency contracts				
Forward contracts				
Yen	\$ 6,562	\$ 220	\$18,997	\$(2,390)
Euro	6,209	(93)	22,513	537
Sterling	375	(12)	3,194	485
Total	<u>\$13,146</u>	<u>\$ 115</u>	<u>\$44,704</u>	<u>\$(1,368)</u>
Options				
Euro	\$ —	\$ —	\$ 2,689	\$ 212
Embedded copper derivative	\$18,433	\$(4,892)	\$ —	\$ —

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

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depending upon their maturity dates. The balance sheet classification of the outstanding derivatives at December 31, 2009 and 2008 was as follows:

(Dollars in thousands)	December 31,	
	2009	2008
Asset (liability)		
Prepaid expenses	\$ 220	\$ 1,234
Other assets	—	—
Other liabilities and accrued items	(4,997)	(2,354)
Other long-term liabilities	—	(36)
Total	<u>\$ (4,777)</u>	<u>\$ (1,156)</u>

All of the foreign currency derivatives secured in 2009 and 2008 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 hedged transactions occur. There were no precious metal hedge contracts outstanding as of December 31, 2009 or 2008.

A summary of the hedging relationships of the outstanding derivative financial instruments designated as cash flow hedges as of December 31, 2009 and 2008 and the amounts transferred into income for the twelve months then ended follows.

(Dollars in thousands)	Effective Portion of Hedge			Ineffective Portion of Hedge	
	Recognized	Reclassified From OCI		Recognized in Income on	
	In OCI at	Into Income During Period		Derivative During Period	
	End of Period	Location	Amount	Location	Amount
Gain (loss)					
2009					
Foreign currency contracts					
Forward contracts	\$ 115	Other-net	\$ (810)	Other-net	\$ —
Options (collars)	—	Other-net	212	Other-net	—
Total	115		(598)		—
Precious metal forward contracts	—	Cost of sales	478	Cost of sales	—
Total	<u>\$ 115</u>		<u>\$ (120)</u>		<u>\$ —</u>
2008					
Foreign currency contracts					
Forward contracts	\$ (1,368)	Other-net	\$(2,325)	Other-net	\$ —
Options (collars)	212	Other-net	(735)	Other-net	—
Total	(1,156)		(3,060)		—
Precious metal forward contracts	—	Cost of sales	—	Cost of sales	—
Total	<u>\$ (1,156)</u>		<u>\$(3,060)</u>		<u>\$ —</u>

The Company secured a debt obligation with an embedded copper derivative in 2009. This derivative provides an economic hedge for the Company's copper inventory against movements in the market price of copper. However, the derivative does not qualify as a hedge for accounting purposes and changes in its fair value are charged against income in the current period. The Company recorded a loss of \$4.9 million in 2009 due to the changes in the derivative's fair value as a result of an increase in copper prices. The loss was recorded as derivative ineffectiveness on the Consolidated Statement of Income. The debt obligation matures in 2010.

The Company had an interest rate swap that was initially designated as a cash flow hedge. However, in 2003, the underlying hedged item was terminated early and the swap no longer qualified as a hedge. A loss of \$0.2 million

was recorded in 2008 due to changes in the swap's fair value as a result of movements in interest rates. The swap was terminated in the fourth quarter 2008.

Total derivative ineffectiveness was an expense of \$4.9 million in 2009, \$0.2 million in 2008 and \$0.1 million in 2007.

In 2006, the Company terminated early various commodity swaps that were designated as cash flow hedges. The gains on the early terminations were deferred into OCI until the original hedged items, the purchases of copper, were acquired and then relieved from inventory. During the first half of 2008, gains totaling \$0.2 million from OCI were credited to cost of sales on the Consolidated Statement of Income. The deferred gains on the commodity swaps were fully amortized out of OCI as of the end of the second quarter 2008.

The Company expects to relieve \$0.1 million from OCI and credit other-net on the Consolidated Statement of Income in 2010.

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 plan. The Other Benefits column includes the U.S. retiree medical and life insurance plan.

(Dollars in thousands)	Pension Benefits		Other Benefits	
	2009	2008	2009	2008
Change in benefit obligation				
Benefit obligation at beginning of year	\$145,524	\$134,741	\$ 32,786	\$ 34,239
Service cost	4,463	5,297	289	303
Interest cost	8,994	8,490	1,929	2,127
Actuarial (gain) loss	8,171	4,241	(1,765)	(1,325)
Benefit payments from fund	(6,393)	(5,682)	—	—
Benefit payments directly by Company	(104)	(112)	(2,710)	(2,955)
Expenses paid from assets	(392)	(360)	—	—
Curtailment gain	(547)	—	—	—
Medicare Part D subsidy	—	—	357	397
Foreign currency exchange rate changes	313	(1,091)	—	—
Benefit obligation at end of year	160,029	145,524	30,886	32,786
Change in plan assets				
Fair value of plan assets at beginning of year	81,810	111,872	—	—
Actual return on plan assets	15,944	(27,372)	—	—
Employer contributions	18,494	4,451	—	—
Benefit payments from fund	(6,393)	(5,682)	—	—
Expenses paid from assets	(392)	(360)	—	—
Foreign currency exchange rate changes	266	(1,099)	—	—
Fair value of plan assets at end of year	109,729	81,810	—	—
Funded status at end of year	<u>\$ (50,300)</u>	<u>\$ (63,714)</u>	<u>\$ (30,886)</u>	<u>\$ (32,786)</u>
Amounts recognized in the Consolidated Balance Sheets consist of:				
Other liabilities and accrued items	\$ —	\$ —	\$ (2,609)	\$ (2,856)
Retirement and post-employment benefits	(50,300)	(63,714)	(28,277)	(29,930)
	<u>\$ (50,300)</u>	<u>\$ (63,714)</u>	<u>\$ (30,886)</u>	<u>\$ (32,786)</u>
Amounts recognized in other comprehensive income (before tax) consist of:				
Net actuarial (gain) loss	\$ 67,446	\$ 67,518	\$ (2,214)	\$ (449)
Net prior service (credit) cost	(4,560)	(6,139)	129	93
	<u>\$ 62,886</u>	<u>\$ 61,379</u>	<u>\$ (2,085)</u>	<u>\$ (356)</u>
Amortizations expected to be recognized during next fiscal year (before tax):				
Amortization of net loss	\$ 2,834	\$ 2,024	\$ —	\$ —
Amortization of prior service credit	(530)	(644)	(36)	(36)
	<u>\$ 2,304</u>	<u>\$ 1,380</u>	<u>\$ (36)</u>	<u>\$ (36)</u>
Additional information				
Accumulated benefit obligation for all defined benefit pension plans	\$156,942	\$142,896	N/A	N/A
For defined benefit pension plans with benefit obligations in excess of plan assets:				
Aggregate benefit obligation	160,029	142,602	N/A	N/A
Aggregate fair value of plan assets	109,729	78,806	N/A	N/A
For defined benefit pension plans with accumulated benefit obligations in excess of plan assets:				
Aggregate accumulated benefit obligation	156,942	139,974	N/A	N/A
Aggregate fair value of plan assets	109,729	78,806	N/A	N/A

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

(Dollars in thousands)	Pension Benefits			Other Benefits		
	2009	2008	2007	2009	2008	2007
Net periodic benefit cost						
Service cost	\$ 4,463	\$ 5,297	\$ 5,001	\$ 289	\$ 303	\$ 301
Interest cost	8,994	8,490	7,977	1,929	2,127	1,909
Expected return on plan assets	(9,746)	(9,061)	(9,002)	—	—	—
Amortization of prior service (benefit)	(549)	(644)	(660)	(36)	(36)	(36)
Recognized net actuarial loss	1,557	1,186	1,823	—	—	—
Curtailment gain	(1,069)	—	—	—	—	—
Net periodic benefit cost	<u>\$ 3,650</u>	<u>\$ 5,268</u>	<u>\$ 5,139</u>	<u>\$ 2,182</u>	<u>\$ 2,394</u>	<u>\$ 2,174</u>

(Dollars in thousands)	Pension Benefits			Other Benefits		
	2009	2008	2007	2009	2008	2007
Change in other comprehensive income						
OCI at beginning of year	\$61,379	\$21,337	\$27,437	\$ (356)	\$ 933	\$(2,203)
Increase (decrease) in OCI:						
Recognized during year — prior service cost (credit)	549	644	660	36	36	36
Recognized during year — net actuarial (losses) gains	(1,557)	(1,225)	(1,823)	—	—	—
Occurring during year — prior service cost	—	39	889	—	—	—
Occurring during year — net actuarial losses (gains)	1,974	40,677	(5,817)	(1,765)	(1,325)	3,100
Other adjustments	522	—	—	—	—	—
Foreign currency exchange rate changes	19	(93)	(9)	—	—	—
OCI at end of year	<u>\$62,886</u>	<u>\$61,379</u>	<u>\$21,337</u>	<u>\$(2,085)</u>	<u>\$ (356)</u>	<u>\$ 933</u>

Summary of key valuation assumptions

	Pension Benefits			Other Benefits		
	2009	2008	2007	2009	2008	2007
Weighted-average assumptions used to determine benefit obligations at fiscal year end						
Discount rate	5.86%	6.16%	N/A	5.88%	6.15%	N/A
Rate of compensation increase	3.00%	2.03%	N/A	3.00%	2.00%	N/A
Weighted-average assumptions used to determine net cost for the fiscal year						
Discount rate	6.65%	6.41%	5.95%	6.15%	6.50%	6.13%
Expected long-term return on plan assets	8.22%	8.21%	8.46%	N/A	N/A	N/A
Rate of compensation increase	2.09%	4.34%	4.35%	2.00%	4.50%	4.50%

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

Effective January 1, 2008, 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 8.25% from 8.5%, with the impact being accounted for as a change in estimate.

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 Retirement Plan Review Committee of the Board of Directors. Management believes that the 8.25% 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 4% of the Company's aggregated total fair value of plan assets as of year-end 2009.

Assumed health care trend rates at fiscal year end	2009	2008
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	2016	2012

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:

(Dollars in thousands)	1-Percentage-Point Increase		1-Percentage-Point Decrease	
	2009	2008	2009	2008
Effect on total of service and interest cost components	\$ 46	\$ 53	\$ (41)	\$ (48)
Effect on post-retirement benefit obligation	629	796	(573)	(718)

Plan Assets

The fair values of the Company's defined benefit pension plan assets at fiscal year-end 2009 by asset category are as follows:

Asset Category	Total	Fair Value Measurements		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
(Dollars in thousands)				
Cash	\$ 16,331	\$ 16,331	\$ —	\$ —
Equity securities:				
U.S. (a)	26,590	19,179	7,411	—
International (b)	11,773	4,741	7,032	—
Emerging markets (c)	9,156	8,951	205	—
Fixed income securities:				
Intermediate-term bonds (d)	17,962	17,962	—	—
Global bonds (e)	18,101	17,583	518	—
Other types of investments:				
Real estate fund (f)	5,523	5,523	—	—
Multi-strategy hedge funds (g)	3,507	—	—	3,507
Private equity funds	786	—	—	786
Total	\$ 109,729	\$ 90,270	\$ 15,166	\$ 4,293

- (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.
- (e) 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.
- (f) 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.
- (g) Includes hedge funds that employ multiple strategies to multiple asset classes with low correlations.

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The following table summarizes changes in the fair value of the Company's defined benefit pension plan Level 3 assets for the year ended December 31, 2009:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)		
	Multi- strategy hedge funds	Private equity funds	Total
(Dollars in thousands)			
Beginning balance at December 31, 2008	\$ 5,965	\$ 781	\$ 6,746
Actual return on plan assets:			
Relating to assets still held at the reporting date	787	(24)	763
Relating to assets sold during the period	(16)	—	(16)
Purchases, sales and settlements	(3,229)	29	(3,200)
Transfers in and/or out of Level 3	—	—	—
Ending balance at December 31, 2009	<u>\$ 3,507</u>	<u>\$ 786</u>	<u>\$ 4,293</u>

The Company's domestic defined benefit pension plan investment strategy, as approved by the Retirement Plan Review Committee, 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 \$8.1 million to its domestic pension plan and \$2.6 million to its other benefit plans in 2010.

Estimated Future Benefit Payments

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

During Fiscal Years	Pension Benefits	Other Benefits	
		Gross Benefit Payment	Net of Medicare Part D Subsidy
(Dollars in thousands)			
2010	\$ 6,389	\$ 3,003	\$ 2,609
2011	6,677	3,064	2,651
2012	7,251	3,133	2,695
2013	7,766	3,168	2,710
2014	8,131	3,115	2,638
2015 through 2019	48,423	15,121	12,397

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 \$2.9 million at December 31, 2009 and \$2.8 million at December 31, 2008 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 \$0.6 million in 2009, \$3.0 million in 2008 and \$2.9 million in 2007. The Company reduced its matching percentage in half effective at the beginning of 2009 and reduced its matching percentage to zero for the majority of its U.S. employees in the second quarter of 2009.

Note J —Contingencies and Commitments***CBD Claims***

The Company is a defendant in proceedings in various state and federal courts 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, claim loss of consortium. Additional CBD claims may arise.

Management believes the Company has substantial defenses in these cases and intends to contest the suits vigorously. 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.

The Company received enhanced insurance coverage as part of the legal settlement with its insurers in the fourth quarter 2007. See Note N to the Consolidated Financial Statements. The enhanced insurance includes occurrence-based coverage for years up to the date of the settlement, including years when the Company did not have any beryllium-related product liability insurance. Claims filed by third-party plaintiffs alleging chronic beryllium disease filed prior to the end of 2022 will be covered by this 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.

Although it is not possible to predict the outcome of the litigation pending against the Company and its subsidiaries, the Company provides 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 the actions could be decided unfavorably in amounts exceeding the Company's reserves. An unfavorable outcome or settlement of a pending CBD case or additional adverse media coverage could encourage the commencement of additional similar litigation. The Company is unable to estimate its potential exposure to unasserted claims.

The Company recorded a reserve for CBD litigation of \$0.6 million as of December 31, 2009 and \$2.0 million at December 31, 2008. The reserve is included in other long-term liabilities on the Consolidated Balance Sheets. The Company also recorded an asset of \$0.3 million as of December 31, 2009 and \$1.7 million as of December 31, 2008 for recoveries from insurance carriers on the outstanding insured claims. The asset is included in other assets on the Consolidated Balance Sheets. Fully-insured settlement payments totaling \$0.9 million for beryllium litigation were made in 2009. There were no settlement payments made in 2008 for beryllium litigation.

While the Company is unable to predict the outcome of the current or future CBD proceedings, based upon currently known facts and assuming collectibility of insurance, the Company does not believe that resolution of the current or 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 of these 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 environmental remediation projects. The Company's environmental engineers perform routine ongoing 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 ongoing studies and for differences between actual and projected costs. The accruals are also 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 2009 and 2008 are as follows:

(Dollars in thousands)	2009	2008
Reserve balance at beginning of year	\$ (6,272)	\$ (5,196)
Expensed	(353)	(1,337)
Paid	1,033	261
Reserve balance at end of year	<u>\$ (5,592)</u>	<u>\$ (6,272)</u>
Ending balance recorded in:		
Other liabilities and accrued items	\$ (953)	\$ (1,407)
Other long-term liabilities	(4,639)	(4,865)

The majority of the spending in 2009 was for clean-up costs associated with the Company's former headquarters building; this facility, which the Company still owned as of year-end 2009, had previously been used for light manufacturing and research and development work. The expense in 2008 included \$1.1 million for this project. The expense in 2009 was primarily for costs associated with a newly identified project with the balance for changes in the estimates of existing projects.

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

Long-term Obligation

The Company had a long-term supply arrangement with Ulba/Kazatomprom of the Republic of Kazakhstan and its marketing representative, Nukem, Inc. of Connecticut, that terminated on December 31, 2008. Purchases of beryllium-containing materials from Nukem were \$8.9 million in 2008 and \$6.4 million in 2007. Beginning in 2009, purchases from Nukem may be made from time to time through the Company's normal purchasing practices.

The Company had agreements to purchase stated quantities of beryl ore, beryllium metal and copper beryllium master alloy from the Defense Logistics Agency of the U.S. Government that expired in 2007. Purchases under these agreements totaled approximately \$4.9 million in 2007.

Other

One of the Company's subsidiaries is a defendant in a U.S. legal case where the plaintiff is alleging patent infringement by the Company and a small number of its customers. The Company has provided an indemnity agreement to certain of those customers, under which the Company will pay any damages awarded by the court. The Company believes it has numerous and strong defenses applicable to both the Company and the indemnified customers and is contesting this action. The Company has filed suit seeking sanctions against this plaintiff. Both of these actions are ongoing. The Company earlier filed a suit in Australia to revoke a corresponding patent and the Australian court ruled in the Company's favor. The Company has not made any payments for damages on behalf of

any customers as of December 31, 2009, nor has the Company recorded a reserve for losses under these indemnification agreements as of December 31, 2009. The Company does not believe a range of potential losses, if any, can be estimated at the present time.

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 \$15.3 million related to workers' compensation, consigned precious metal guarantees, environmental remediation issues and other matters that expire in 2010.

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 (in thousands):

Issued as of January 1, 2007	26,362
Exercise of stock options	296
Vesting of restricted shares	29
Issued as of December 31, 2007	26,687
Exercise of stock options	12
Vesting of restricted shares	8
Issued as of December 31, 2008	26,707
Exercise of stock options	32
Vesting of performance restricted shares	61
Issued as of December 31, 2009	26,800

On May 2, 2000 the Company's Board of Directors adopted a share purchase rights plan and declared a dividend distribution of one right for each share of Common Stock outstanding as of the close of business on May 16, 2000. The plan allows for new shares issued after May 16, 2000 to receive one right subject to certain limitations and exceptions. Each right entitles the shareholder to buy one one-hundredth of a share of Serial Preferred Stock, Series A, at an initial exercise price of \$110. A total of 450,000 unissued shares of Serial Preferred Stock will be designated as Series A Preferred Stock. Each share of Series A Preferred Stock will be entitled to participate in dividends on an equivalent basis with one hundred shares of common stock and will be entitled to one vote. The rights will not be exercisable and will not be evidenced by separate right certificates until a specified time after any person or group acquires beneficial ownership of 20% or more (or announces a tender offer for 20% or more) of common stock. The rights expire on May 16, 2010, and can be redeemed for one cent per right under certain circumstances.

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.

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 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. Compensation cost was zero in 2009 and 2008 and less than \$0.1 million in 2007. There is no remaining unvested value to be expensed on the outstanding options as of December 31, 2009.

The following table summarizes the Company's stock option activity during 2009:

(Shares in thousands)	Number of Options	Weighted- average Exercise Price per Share	Aggregate Intrinsic Value	Weighted- average Remaining Term
Outstanding at December 31, 2008	355	\$ 15.81		
Exercised	(32)	15.71		
Cancelled	(3)	14.91		
Outstanding at December 31, 2009	320	15.83	\$1,054,000	3.50 years
Vested and expected to vest as of December 31, 2009	320	15.83	1,054,000	3.50 years
Exercisable at December 31, 2009	320	15.83	1,054,000	3.50 years

Summarized information on options outstanding as of December 31, 2009 follows:

	Number Outstanding and Exercisable (Thousands)	Weighted- average Remaining Life (Years)	Weighted- average Exercise Price
Range of Option Prices			
\$5.55-\$8.10	34	3.25	\$ 6.12
\$12.15-\$14.80	74	3.06	12.81
\$15.97-\$17.68	162	4.48	17.26
\$20.64-\$22.43	50	1.13	22.22
	320	3.50	\$ 15.83

Cash received from the exercise of stock options totaled \$0.5 million in 2009, \$0.2 million in 2008 and \$5.0 million in 2007. The tax benefit realized from tax deductions from exercises was \$0.1 million in 2009, \$0.5 million in 2008 and \$2.8 million in 2007. The total intrinsic value of options exercised during the years ended December 31, 2009, 2008 and 2007 was \$0.2 million, \$0.1 million and \$9.3 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 2009, 2008 and 2007 was \$15.67, \$28.67 and \$44.98, respectively.

Compensation cost was \$2.4 million in 2009, \$1.7 million in 2008 and \$1.3 million in 2007. The unamortized compensation cost on the outstanding restricted stock was \$2.6 million as of December 31, 2009 and is expected to be amortized over a weighted-average period of 22 months.

The following table summarizes the restricted stock activity during 2009:

(Shares in thousands)	Number of Shares	Weighted- average Grant Date Fair Value
Outstanding at December 31, 2008	135	\$ 34.35
Granted	184	15.67
Vested	(27)	19.31
Forfeited	(9)	20.44
Outstanding at December 31, 2009	<u>283</u>	<u>\$ 23.11</u>

Long-term Incentive Plans

Under long-term incentive plans (LTIP), 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.

Under the 2007-2009 and the 2008-2010 long-term incentive plans, base awards will be settled in shares of the Company's common stock while performance achievement in excess of the defined targets will be paid in cash based upon the share price of the Company's common stock as of the end of the performance period. In the first quarter of 2009, approximately 61,000 shares were issued to employees for their achievement under the 2006-2008 LTIP. Compensation expense is based upon the performance projections for the three-year period, the percentage of requisite service rendered and the fair market value of the Company's common stock on the date of the grant. The offset to the compensation expense for the portion of the award to be settled in shares is recorded within shareholders' equity and totaled (\$0.3) million for 2009, \$0.1 million for 2008 and \$1.9 million for 2007. The related balance in shareholders' equity was \$0.3 million as of December 31, 2009.

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 2009:

(Shares in thousands)	Number of Shares	Weighted- average Grant Date Fair Value
Outstanding at December 31, 2008	105	\$ 28.53
Granted	16	14.74
Sale	(4)	15.68
Distribution	(10)	15.68
Outstanding at December 31, 2009	107	\$ 27.29

The Company recorded expense in 2009 for the directors' deferred compensation plan of \$0.1 million, income of \$1.2 million in 2008 and expense of \$0.3 million in 2007. During the years ended December 31, 2009, 2008 and 2007, the weighted-average grant date fair value of shares granted was \$14.74, \$24.18 and \$45.22, respectively.

Stock Appreciation Rights

The Company may grant stock appreciation rights (SAR) to certain employees and non-employee directors. Upon exercise of vested SAR, 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 SAR agreement) divided by the common stock price. The strike price of the SAR is equal to or greater than the market value of the Company's common shares on the day of the grant. The number of SAR available to be issued is established by plans approved by the shareholders. The vesting period and the life of the SAR are established in the SAR agreement at the time of the grant. The exercise of the SAR is satisfied by the issuance of treasury shares.

In the first quarter 2009, the Company issued approximately 350,000 SAR at a strike price of \$15.01 per share. The SAR vest three years from the date of grant and expire in ten years.

The following table summarizes the Company's SAR activity during 2009:

(Shares in thousands)	Number of SAR	Weighted- average Exercise Price per Share	Aggregate Intrinsic Value	Weighted- average Remaining Term
Outstanding at December 31, 2008	180	\$ 29.09		
Granted	350	15.01		
Outstanding at December 31, 2009	530	19.80	\$1,234,000	8.33 years
Vested and expected to vest as of December 31, 2009	530	19.80	1,234,000	8.33 years
Exercisable at December 31, 2009	111	24.03	—	6.34 years

The fair value of the SAR granted in 2009 was \$7.83. The fair value will be amortized to compensation cost on a straight-line basis over the three-year vesting period. Compensation cost was \$1.4 million, \$0.8 million and \$0.7 million for 2009, 2008 and 2007, respectively and was included in selling, general and administrative expense. The unamortized compensation cost balance was \$2.1 million as of December 31, 2009.

Summarized information on SAR outstanding as of December 31, 2009 follows:

<u>SAR Prices</u>	<u>Number Outstanding (Thousands)</u>	<u>Weighted- average Remaining Life (Years)</u>	<u>Weighted- average Exercise Price</u>
\$15.01	350	9.11	\$ 15.01
\$24.03	111	6.34	24.03
\$27.78	30	8.13	27.78
\$44.72	39	7.13	44.72
	<u>530</u>	<u>8.33</u>	<u>\$ 19.80</u>

The SAR granted at \$24.03 are exercisable.

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

	<u>2009</u>	<u>2008</u>	<u>2007</u>
Risk-free interest rate	0.31%	2.14%	5.03%
Dividend yield	0%	0%	0%
Volatility	55.0%	49.2%	45.7%
Expected lives (in years)	6.5	6.5	6.0

The risk-free rate of return was based upon the three-month Treasury bill rate at the time the SAR 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 SAR. This approach to measuring volatility is consistent with the approach used to calculate the volatility assumption in the valuation of stock options. Prior analyses indicated that the Company's employee stock options have an average life of approximately six years. Prior to 2006, the Company had not granted SAR in a significant number of years. Management believes that the SAR have similar features and should function in a manner similar to employee 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, 2009, 2008 and 2007.

	<u>December 31,</u>		
<u>(Dollars in thousands)</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Foreign currency translation adjustment	\$ 2,324	\$ 2,346	\$ 41
Derivative financial instruments (net of taxes of (\$1,362) in 2009, (\$1,808) in 2008 and (\$1,859) in 2007)	1,477	652	555
Pension and other retirement plan adjustment (net of taxes of (\$10,316) in 2009, (\$10,224) in 2008 and \$2,902 in 2007)	(50,485)	(50,799)	(25,172)
Total	<u>\$(46,684)</u>	<u>\$(47,801)</u>	<u>\$(24,576)</u>

Note M —Segment Reporting and Geographic Information

Beginning in 2009, the operating results for Zentrix Technologies Inc., a small, wholly owned subsidiary, are included in the Advanced Material Technologies and Services segment. Previously, Zentrix was included in the All Other column. This change was made because the management of Advanced Material Technologies and Services is now responsible for Zentrix and this structure is consistent with the internal reporting used by the Chairman of the Board in evaluating operations. Prior year results have been recast to reflect this change.

(Dollars in thousands)	Advanced Material Technologies and Services	Specialty Engineered Alloys	Beryllium and Beryllium Composites	Engineered Material Systems	Subtotal	All Other	Total
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
2008							
Sales to external customers	\$ 480,327	\$ 299,867	\$ 63,604	\$ 65,913	\$ 909,711	\$ —	\$ 909,711
Intersegment sales	2,332	776	452	1,405	4,965	—	4,965
Operating profit (loss)	10,847	5,846	8,372	5,931	30,996	(2,925)	28,071
Depreciation, depletion and amortization	10,152	18,246	740	2,273	31,411	2,415	33,826
Expenditures for long-lived assets	7,901	9,145	13,165	1,145	31,356	4,580	35,936
Assets	215,700	239,810	54,224	23,087	532,821	49,076	581,897
2007							
Sales to external customers	\$ 533,503	\$ 289,971	\$ 60,489	\$ 70,886	\$ 954,849	\$ 860	\$ 955,709
Intersegment sales	1,862	3,546	1,062	2,127	8,597	—	8,597
Operating profit	60,445	7,585	7,837	4,726	80,593	3,872	84,465
Depreciation, depletion and amortization	5,589	12,510	900	2,340	21,339	2,541	23,880
Expenditures for long-lived assets	10,709	12,485	5,089	2,963	31,246	2,304	33,550
Assets	195,110	229,582	38,148	26,843	489,683	60,868	550,551

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

The All Other column includes the parent company expenses, the operating results for BEM Services, Inc., a wholly owned subsidiary, and other corporate charges. BEM Services, Inc. provides administrative and financial services to the other businesses in the Company on a cost-plus basis. The All Other column included the operating results of Circuits Processing Technology, Inc. in 2007. This small facility manufactured circuitry for defense and commercial applications and was sold in the first quarter 2007. The assets shown in the All Other column include the assets used by these operations as well as cash and long-term deferred income taxes.

Sales from U.S. operations to external domestic and foreign customers were \$540.4 million in 2009, \$692.6 million in 2008 and \$714.3 million in 2007. Sales attributed to countries based upon the location of customers and long-lived assets, which include property, plant and equipment, intangible assets and goodwill, deployed by country are as follows:

(Dollars in thousands)	<u>2009</u>	<u>2008</u>	<u>2007</u>
Sales			
United States	\$466,031	\$576,141	\$541,589
All other	<u>249,155</u>	<u>333,570</u>	<u>414,120</u>
Total	<u>\$715,186</u>	<u>\$909,711</u>	<u>\$955,709</u>
Long-lived assets			
United States	\$321,141	\$260,353	\$203,473
All other	<u>12,553</u>	<u>13,626</u>	<u>12,896</u>
Total	<u>\$333,694</u>	<u>\$273,979</u>	<u>\$216,369</u>

No individual country, other than the United States, or customer accounted for 10% or more of the Company's sales for the years presented. Sales outside the United States are primarily from Asia and Europe.

Note N —Litigation Settlement Gain

In the fourth quarter 2008, the Company reached an agreement to settle a lawsuit in which the Company sought to recover its rights under a previously signed indemnity agreement with a customer. The settlement of \$1.1 million, net of legal fees, was recorded as a litigation settlement gain on the Consolidated Statement of Income in 2008. The cash was received in 2008.

In a separate case, during the fourth quarter 2007, the Company reached an agreement to settle a lawsuit against its former insurers. The Company originally filed the lawsuit in attempts to resolve a dispute over how insurance coverage should be applied to incurred legal defense costs and indemnity payments. In the third quarter 2006, the court issued a summary judgment in the Company's favor and awarded the Company damages of \$7.8 million to be paid by the Company's former insurance providers. The damages represented costs previously paid by the Company over a number of years that were not reimbursed by the insurance providers. The damages also included accrued interest on those costs. Due to uncertainties surrounding the appeal process and the ultimate collection of the award, the \$7.8 million was never recorded in the Consolidated Financial Statements.

Under the terms of the settlement, the insurers agreed to pay the Company \$17.5 million in cash, provide enhanced insurance coverage and apply insurance coverage to costs and indemnity payments in a manner consistent with the Company's interpretation. See Note J to the Consolidated Financial Statements. The Company agreed to withdraw its bad faith claim, which had been scheduled for trial in the first quarter 2008, and dismissed its rights to the prior \$7.8 million award.

The Company applied \$1.1 million of the settlement against indemnity and defense costs that had been previously recorded on the Consolidated Balance Sheet as recoverable costs from the insurance providers, with the remaining \$16.4 million of the settlement recorded as income. The Company incurred \$7.7 million in legal costs during 2007 pursuing this action. The net \$8.7 million benefit was recorded as a litigation settlement gain on the Consolidated Statement of Income.

During the fourth quarter 2007, one of the defendants paid \$6.2 million directly to the Company's attorneys, reducing the Company's receivable from this settlement as well as the Company's payable to the attorneys by the same amount. The remaining \$11.3 million due the Company was recorded under other receivables on the Consolidated Balance Sheet as of December 31, 2007 and was received early in the first quarter 2008.

Note O —Interest

Interest expense associated with active construction and mine development projects is capitalized and amortized over the future useful lives of the related assets. The following chart summarizes the interest incurred, capitalized and paid, as well as the amortization of capitalized interest for 2009, 2008 and 2007.

(Dollars in thousands)	2009	2008	2007
Interest incurred	\$ 1,411	\$ 2,365	\$ 2,138
Less capitalized interest	112	370	378
Total net expense	\$ 1,299	\$ 1,995	\$ 1,760
Interest paid	\$ 898	\$ 2,193	\$ 2,104
Amortization of capitalized interest included in cost of sales	\$ 517	\$ 595	\$ 567

The difference in expense among 2009, 2008 and 2007 was due to changes in the level of outstanding debt and the average borrowing rate. Amortization of deferred financing costs within interest expense was \$0.4 million in each of the three years presented.

Note P —Income Taxes

The (loss) income before income taxes and income taxes (benefit) are comprised of the following components, respectively:

(Dollars in thousands)	2009	2008	2007
(Loss) income before income taxes:			
Domestic	\$(21,288)	\$24,646	\$79,545
Foreign	504	1,430	3,160
Total (loss) income before income taxes	\$(20,784)	\$26,076	\$82,705
Income taxes (benefit):			
Current income taxes:			
Domestic	\$ 1,018	\$ 659	\$13,152
Foreign	618	904	968
Total current	1,636	1,563	14,120
Deferred income taxes:			
Domestic	\$(10,241)	\$ 6,267	\$13,215
Foreign	(107)	(268)	1,160
Valuation allowance	283	157	925
Total deferred	(10,065)	6,156	15,300
Total income taxes (benefit)	\$ (8,429)	\$ 7,719	\$29,420

The reconciliation of the federal statutory and effective income tax rates follows:

	<u>2009</u>	<u>2008</u>	<u>2007</u>
Federal statutory rate	(35.0)%	35.0%	35.0%
State and local income taxes, net of federal tax effect	(1.9)	2.1	0.9
Effect of excess of percentage depletion over cost depletion	(2.3)	(5.4)	(1.4)
Manufacturing production deduction	(1.3)	(1.5)	(1.2)
Officers' compensation	0.1	0.7	1.5
Adjustment to unrecognized tax benefits	(3.4)	(5.0)	—
Taxes on foreign source income	0.9	0.6	1.0
Other items	<u>2.3</u>	<u>3.1</u>	<u>(0.2)</u>
Effective tax rate (benefit)	<u>(40.6)%</u>	<u>29.6%</u>	<u>35.6%</u>

Included in domestic income taxes, as shown in the Consolidated Statements of Income, are (\$0.6) million, \$0.8 million, and \$1.2 million of state and local income taxes in 2009, 2008 and 2007, respectively.

The Company had domestic and foreign income tax payments (refunds) of (\$4.1) million, \$8.6 million and \$13.8 million in 2009, 2008 and 2007, respectively.

Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting bases and the tax bases of assets and liabilities. Deferred taxes recorded in the Consolidated Balance Sheets consist of the following:

(Dollars in thousands)	<u>December 31,</u>	
	<u>2009</u>	<u>2008</u>
Asset (liability)		
Post-retirement benefits other than pensions	\$ 12,141	\$ 12,964
Alternative Minimum Tax credit	4,211	7,404
Other reserves	8,088	6,927
Environmental reserves	1,975	2,181
Inventory	7,771	—
Pensions	15,527	15,900
Derivative instruments and hedging activities	1,920	466
Net operating loss and credit carryforward	5,095	4,488
Miscellaneous	<u>380</u>	<u>80</u>
	<u>57,108</u>	<u>50,410</u>
Valuation allowance	<u>(3,696)</u>	<u>(2,952)</u>
Total deferred tax assets	<u>53,412</u>	<u>47,458</u>
Depreciation	(24,674)	(26,028)
Amortization	(8,248)	(4,238)
Inventory	—	(1,602)
Capitalized interest expense	(348)	(440)
Mine development	<u>(653)</u>	<u>(1,170)</u>
Total deferred tax liabilities	<u>(33,923)</u>	<u>(33,478)</u>
Net deferred tax asset	<u>\$ 19,489</u>	<u>\$ 13,980</u>

The Company had deferred income tax assets offset with a valuation allowance for state and foreign net operating losses and state investment tax credit carryforwards. The Company intends to maintain a valuation allowance on these deferred tax assets until a realization event occurs to support reversal of all or a portion of the allowance.

At December 31, 2009, for income tax purposes, the Company had foreign net operating loss carryforwards of \$3.7 million that do not expire, and \$8.5 million that expire in calendar years 2011 through 2018. The Company had state net operating loss carryforwards of \$12.9 million that expire in calendar years 2010 through 2025. The

Company had state tax credits of \$1.9 million that expire in calendar years 2010 through 2024. The Company had Alternative Minimum Tax credits of \$4.2 million that do not expire.

The Company files income tax returns in the U.S. federal jurisdiction, and in various state, local and foreign jurisdictions. With limited exceptions, the Company is no longer subject to U.S. federal examinations for years before 2002, state and local examinations for years before 2006, and foreign examinations for tax years before 2003. The Company is presently under examination for the income tax filings in a state jurisdiction.

A reconciliation of the Company's unrecognized tax benefits for the years ending December 31, 2009 and 2008 is as follows:

(Dollars in thousands)	2009	2008
Balance as of January 1	\$ 3,476	\$ 5,368
Additions to tax positions related to current year	—	359
Reduction to tax positions related to prior years	(1,029)	—
Lapses on statutes of limitations	(3)	(2,251)
Balance as of December 31	<u>\$ 2,444</u>	<u>\$ 3,476</u>

At December 31, 2009, the Company had \$2.7 million of unrecognized tax benefits, of which \$2.3 million would affect the Company's effective tax rate if recognized. The gross unrecognized tax benefits will differ from the amount that would affect the effective tax rate due to the impact of foreign country offsets relating to transfer pricing adjustments and other offsetting items.

The Company classifies all interest and penalties as income tax expense. The Company recorded approximately \$0.3 million of accrued interest and penalties related to uncertain tax positions.

A provision has not been made with respect to \$23.1 million of unremitted foreign earnings at December 31, 2009 because such earnings may be considered to be reinvested indefinitely. It is not practical to estimate the amount of unrecognized deferred tax liability for undistributed foreign earnings.

Note Q —Earnings Per Share

The following table sets forth the computation of basic and diluted net earnings per share (EPS):

(Thousands except per share data)	2009	2008	2007
Numerator for basic and diluted EPS:			
Net (loss) income	\$ (12,355)	\$ 18,357	\$ 53,285
Denominator:			
Denominator for basic EPS:			
Weighted-average shares outstanding	20,191	20,335	20,320
Effect of dilutive securities:			
Stock options and stock appreciation rights	—	85	240
Restricted stock	—	29	28
Performance restricted shares	—	94	24
Diluted potential common shares	<u>—</u>	<u>208</u>	<u>292</u>
Denominator for diluted EPS:			
Adjusted weighted-average shares outstanding	<u>20,191</u>	<u>20,543</u>	<u>20,612</u>
Basic EPS	<u>\$ (0.61)</u>	<u>\$ 0.90</u>	<u>\$ 2.62</u>
Diluted EPS	<u>\$ (0.61)</u>	<u>\$ 0.89</u>	<u>\$ 2.59</u>

In accordance with accounting guidelines, no potential common shares shall be included in the computation of any diluted per share amount when a loss from continuing operations exists. Accordingly, dilutive securities totaling 163,000 have been excluded from the diluted EPS calculation for 2009.

The following are the options to purchase common stock with exercise prices in excess of the average annual share price and the stock appreciation rights with grant prices in excess of the average annual share price that were excluded from the diluted EPS calculations as their effect would have been anti-dilutive:

(Thousands)	<u>2009</u>	<u>2008</u>	<u>2007</u>
Stock options	50	—	—
Stock appreciation rights	180	69	—
Total	<u>230</u>	<u>69</u>	<u>—</u>

Note R —Related Party Transactions

The Company had outstanding loans of \$0.1 million with four employees, including one executive officer, at December 31, 2009 and \$0.1 million with five employees, including one executive officer, at December 31, 2008. The loans were made in the first quarter 2002 pursuant to life insurance agreements between the Company and the employees. The portion of the premiums paid by the Company is treated as a loan from the Company to the employees and the loans are secured by the insurance policies, which are owned by the employees. The agreements require each employee to maintain the insurance policy's cash surrender value in an amount at least equal to the outstanding loan balance. The loans are payable from the insurance proceeds upon the employee's death or at an earlier date due to the occurrence of specified events. The loans bear an interest rate equal to the applicable federal rate. There have been no modifications to the loan terms since the inception of the agreements.

Note S —Subsequent Event (Unaudited)

The Company acquired all of the outstanding shares of Academy Corporation for \$22.7 million in cash in January 2010. Academy, based in Albuquerque, New Mexico, 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.

The Company financed the acquisition with a combination of cash and borrowings under the revolving credit agreement. In conjunction with the purchase, the Company transferred ownership of Academy's precious metal inventory to a financial institution for its market value of \$7.2 million and consigned it back under the existing consignment lines. The purchase price includes amounts to be held in escrow pending resolution of matters as defined in the purchase agreement.

Note T —Quarterly Data (Unaudited)

The following tables summarize selected quarterly financial data for the years ended December 31, 2009 and 2008:

(Dollars in thousands except per share data)	2009				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Net sales	\$135,359	\$174,134	\$190,538	\$215,155	\$715,186
Gross margin	14,602	22,134	25,191	29,495	91,422
Percent of sales	10.8%	12.7%	13.2%	13.7%	12.8%
Net income (loss)	\$ (8,144)	\$ (785)	\$ 126	\$ (3,552)	\$ (12,355)
Net income (loss) per share of common stock:					
Basic	(0.40)	(0.04)	0.01	(0.18)	(0.61)
Diluted	(0.40)	(0.04)	0.01	(0.18)	(0.61)
Stock price range:					
High	17.27	19.19	25.38	27.06	
Low	10.50	12.41	14.11	17.11	

(Dollars in thousands except per share data)	2008				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Net sales	\$226,347	\$246,584	\$240,494	\$196,286	\$909,711
Gross margin	36,958	44,639	45,173	25,105	151,875
Percent of sales	16.3%	18.1%	18.8%	12.8%	16.7%
Net income (loss)	\$ 4,596	\$ 7,158	\$ 9,909	\$ (3,306)	\$ 18,357
Net income (loss) per share of common stock:					
Basic	0.23	0.35	0.49	(0.16)	0.90
Diluted	0.22	0.35	0.48	(0.16)	0.89
Stock price range:					
High	38.12	34.63	31.27	19.41	
Low	23.77	24.60	19.07	6.98	

The results for the fourth quarter 2009 include derivative ineffectiveness expense of \$4.9 million.

Lower of cost or market charges reduced gross margin by \$0.8 million in the first quarter 2009. In 2008, lower of cost or market charges reduced gross margin by \$6.0 million in the second quarter and \$9.2 million in the fourth quarter.

Sales and gross margin were reduced by \$2.6 million in the first quarter 2008 to correct a billing error that occurred in 2007 that was not material to the 2007 results.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

We carried out an evaluation under the supervision and with participation of our management, including the chief executive officer and chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2009 pursuant to Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act). Based upon that evaluation, our management, including the chief executive officer and chief financial officer, concluded that our disclosure controls and procedures were effective as of the evaluation date.

There have been no changes in our internal controls over financial reporting that occurred during the quarter ended December 31, 2009 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

The Report of Management on Internal Control over Financial Reporting and the Report of Independent Registered Public Accounting Firm thereon are set forth in Part II, Item 8 of this Annual Report on Form 10-K and are incorporated herein by reference.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information under “Election of Directors” in the proxy statement for our 2010 annual meeting of shareholders, to be filed with the Securities and Exchange Commission pursuant to Regulation 14A, is incorporated herein by reference. The information required by Item 10 relating to our executive officers is included under the caption “Executive Officers of the Registrant” in Part I of this Form 10-K and is incorporated by reference into this section. The information required by Item 10 with respect to directors, the Audit Committee of the Board of Directors and Audit Committee financial experts is incorporated herein by reference from the section entitled “Corporate Governance; Committees of the Board of Directors — Audit Committee” and “— Audit Committee Expert, Financial Literacy and Independence” in the proxy statement for our 2010 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A. The information required by Item 10 regarding compliance with Section 16(a) of the Exchange Act is incorporated by reference from the section entitled “Section 16(a) Beneficial Ownership Reporting Compliance” in the proxy statement for our 2010 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

We have adopted a Policy Statement on Significant Corporate Governance Issues and a Code of Conduct Policy that applies to our chief executive officer and senior financial officers, including the principal financial and accounting officer, controller and other persons performing similar functions, in compliance with applicable New York Stock Exchange and Securities and Exchange Commission requirements. These materials, along with the charters of the Audit, Governance and Organization, Compensation and Retirement Plan Review Committees of our Board of Directors, which also comply with applicable requirements, are available on our web site at www.beminc.com, and copies are also available upon request by any shareholder to Secretary, Brush Engineered Materials Inc., 6070 Parkland Blvd., Mayfield Heights, Ohio 44124. We make our reports on Forms 10-K, 10-Q and 8-K available on our web site, free of charge, as soon as reasonably practicable after these reports are filed with the Securities and Exchange Commission, and any amendments and/or waivers to our Code of Conduct Policy, Statement on Significant Corporate Governance Issues and Committee Charters will also be made available on our web site. The information on our web site is not incorporated by reference into this Annual Report on Form 10-K.

Item 11. EXECUTIVE COMPENSATION

The information required under Item 11 is incorporated by reference from the sections entitled “Executive Compensation” and “2009 Director Compensation” in the proxy statement for our 2010 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required under Item 12 regarding beneficial ownership is incorporated by reference from the section entitled “Security Ownership of Certain Beneficial Owners and Management” in the proxy statement for our 2010 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A. The Equity Compensation Plan Information required by Item 12 is set forth in the table below.

Equity Compensation Table

<u>Plan Category</u>	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-average Exercise Price of Outstanding Options, Warrants and Rights	Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))
Equity compensation plans approved by security holders	1,202,051 ⁽¹⁾	\$18.30 ⁽²⁾	362,842 ⁽³⁾
Equity compensation plans not approved by security holders	—	—	—
Total	1,202,051	\$18.30	362,842

(1) Consists of options awarded under the 1979, 1984, 1989, 1995 and 2006 Stock Incentive Plans, the 1997 Non-employee Director Stock Incentive Plans and the 2006 Non-employee Director Equity Plan. This amount includes 258,557 restricted shares, 24,640 restricted stock units and 68,918 performance restricted shares at the target level. In addition, up to 30,625 performance shares could be issued if performance goals are achieved above target.

(2) The weighted-average calculation does not include restricted shares, restricted stock units or performance restricted shares as they have no exercise price.

(3) Represents the number of shares of common stock available to be awarded as of December 31, 2009. Effective May 2, 2006, all equity compensation awards are granted pursuant to the shareholder approved 2006 Stock Incentive Plan and the 2006 Non-employee Director Equity Plan.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required under Item 13 is incorporated by reference from the sections entitled “Related Party Transactions” and “Corporate Governance; Committees of the Board of Directors — Director Independence” of the proxy statement for our 2010 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required under Item 14 is incorporated by reference from the section entitled “Ratification of Independent Registered Public Accounting Firm” of the proxy statement for our 2010 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) 1. Financial Statements and Supplemental Information

The financial statements listed in the accompanying index to financial statements are included in Part II, Item 8 of this Form 10-K.

(a) 2. Financial Statement Schedules

The following consolidated financial information for the years ended December 31, 2009, 2008 and 2007 is submitted herewith:

Schedule II — Valuation and qualifying accounts.

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

(a) 3. Exhibits

All documents referenced below were filed pursuant to the Exchange Act by Brush Engineered Materials Inc., file number 001-15885, unless otherwise noted.

- (3a) Amended and Restated Articles of Incorporation of Brush Engineered Materials Inc. (filed as Annex B to the Registration Statement on Form S-4 filed by the Company on February 1, 2000, Registration No. 333-95917), incorporated herein by reference.
- (3b) Amended and Restated Code of Regulations of Brush Engineered Materials Inc. (filed as Exhibit 4b to the Current Report on Form 8-K filed by the Company on May 16, 2000), incorporated herein by reference.
- (3c) Amended and Restated Code of Regulations of Brush Engineered Materials Inc. (filed as Appendix A to the Company's Proxy Statement dated March 26, 2009), incorporated herein by reference.
- (4a) Rights Agreement, dated as of May 10, 2000, by and between Brush Engineered Materials Inc. and National City Bank, N.A. as Rights Agent (filed as Exhibit 4a to the Current Report on Form 8-K filed by the Company on May 16, 2000), incorporated herein by reference.
- (4b) First Amendment to Rights Agreement, dated as of December 7, 2004, by and between Brush Engineered Materials Inc. and LaSalle Bank, N.A. as Rights Agent (filed as Exhibit 4.1 to the Current Report on Form 8-K filed by the Company on December 13, 2004), incorporated herein by reference.
- (4c) Second Amendment to Rights Agreement, dated as of July 31, 2008, by and between Brush Engineered Materials Inc. and Wells Fargo Bank, N.A., as Rights Agent (filed as Exhibit 4.1 to the Registration Statement on Form 8-A/A filed on July 31, 2008) incorporated herein by reference.
- (4d) Indenture Modification between Toledo-Lucas County Port Authority, dated as of May 30, 2003 (filed as Exhibit 4 to the Company's Quarterly Report on Form 10-Q for the period ending June 27, 2003), incorporated herein by reference.
- (4e) Pursuant to Regulation S-K, Item 601(b)(4), the Company agrees to furnish to the Securities and Exchange Commission, upon its request, a copy of the instruments defining the rights of holders of long-term debt of the Company that are not being filed with this report.
- (4f) Credit Agreement dated November 7, 2007 among Brush Engineered Materials Inc. and other borrowers and JPMorgan Chase, N.A., acting for itself and as agent for certain other banking institutions as lenders (filed as Exhibit 99.1 to the Current Report on Form 8-K filed by the Company on November 7, 2007), incorporated herein by reference.
- (4g) First Amendment to Credit Agreement dated December 20, 2007 among Brush Engineered Materials Inc. and other borrowers and JPMorgan Chase, N.A., acting for itself and as agent for certain other banking institutions as lenders (filed as Exhibit 99.1 to the Current Report on Form 8-K filed by the Company on December 26, 2007), incorporated herein by reference.

- (4h) Second Amendment to Credit Agreement dated June 11, 2008 among Brush Engineered Materials Inc. and other borrowers and JP Morgan Chase, N.A., acting for itself and as agent for certain other banking institutions as lenders (filed as Exhibit 99.1 to the Current Report on Form 8-K filed by the Company on June 16, 2008), incorporated herein by reference.
- (4i) Second Amended and Restated Precious Metals Agreement dated December 28, 2007 between Brush Engineered Materials Inc. and The Bank of Nova Scotia (filed as Exhibit 99.1 to the Current Report on Form 8-K filed by the Company on December 28, 2007), incorporated herein by reference.
- (4j) First Amendment to the Second Amended and Restated Precious Metals Agreement dated March 3, 2008 between Brush Engineered Materials Inc. and the Bank of Nova Scotia (filed as Exhibit 99.1 to the Current Report on Form 8-K filed by the Company on March 3, 2008), incorporated herein by reference.
- (4k)# Second Amendment to the Second Amended and Restated Precious Metals Agreement dated June 25, 2008 between Brush Engineered Materials Inc. and the Bank of Nova Scotia.
- (4l) Third Amendment to the Second Amended and Restated Precious Metals Agreement dated October 2, 2009 between Brush Engineered Materials Inc. and The Bank of Nova Scotia (filed as Exhibit 4.1 to the Company's Form 8-K on October 8, 2009), incorporated herein by reference.
- (4m)# Fourth Amendment to the Second Amended and Restated Precious Metals Agreement dated February 11, 2010 between Brush Engineered Materials Inc. and The Bank of Nova Scotia.
- (10a) Form of Indemnification Agreement entered into by the Company and its executive officers (filed as Exhibit 10a to the Company's Annual Report on Form 10-K for the year ended December 31, 2008), incorporated herein by reference.
- (10b) Form of Indemnification Agreement entered into by the Company and its directors. (filed as Exhibit 10b to the Company's Annual Report on Form 10-K for the year ended December 31, 2008), incorporated herein by reference.
- (10c)* Amended and Restated Form of Severance Agreement for Executive Officers (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ending June 27, 2008), incorporated herein by reference.
- (10d)* Amended and Restated Form of Severance Agreement for Key Employees (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ending June 27, 2008), incorporated herein by reference.
- (10e)* Form of Executive Insurance Agreement entered into by the Company and certain employees dated January 2, 2002 (filed as Exhibit 10g to the Company's Annual Report on Form 10-K for the year ended December 31, 1994), incorporated herein by reference.
- (10f)* Form of Trust Agreement between the Company and Key Trust Company of Ohio, N.A. (formerly Ameritrust Company National Association) on behalf of the Company's executive officers (filed as Exhibit 10e to the Company's Annual Report on Form 10-K for the year ended December 31, 1994), incorporated herein by reference.
- (10g)* 2009 Management Performance Compensation Plan (filed as Exhibit 10.1 to the Current Report on Form 8-K filed by the Company on February 2, 2009), incorporated herein by reference.
- (10h)*# 2010 Management Performance Compensation Plan.
- (10i)* Long-term Incentive Plan for the performance period January 1, 2007 through December 31, 2009 (filed as Exhibit 10.2 to Amendment No. 1 to the Current Report on Form 8-K filed by the Company on February 16, 2007), incorporated herein by reference.
- (10j)* Long-term Incentive Plan for the performance period January 1, 2008 through December 31, 2010 (filed as Exhibit 10o to the Company's Annual Report on Form 10-K for the year ended December 31, 2007), incorporated herein by reference.
- (10k)* 1979 Stock Option Plan, as amended pursuant to approval of shareholders on April 21, 1982 (filed by Brush Wellman Inc. as Exhibit 15A to Post-Effective Amendment No. 3 to Registration Statement No. 2-64080), incorporated herein by reference.
- (10l)* Amendment, effective May 16, 2000, to the 1979 Stock Option Plan (filed as Exhibit 4b to Post-Effective Amendment No. 5 to Registration Statement on Form S-8, Registration No. 2-64080), incorporated herein by reference.

(10m)*	1984 Stock Option Plan as amended by the Board of Directors on April 18, 1984 and February 24, 1987 (filed by Brush Wellman Inc. as Exhibit 4.4 to Registration Statement on Form S-8, Registration No. 33-28605), incorporated herein by reference.
(10n)*	Amendment, effective May 16, 2000, to the 1984 Stock Option Plan (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement on Form S-8, Registration No. 2-90724), incorporated herein by reference.
(10o)*	1989 Stock Option Plan (filed as Exhibit 4.5 to Registration Statement on Form S-8, Registration No. 33-28605), incorporated herein by reference.
(10p)*	Amendment, effective May 16, 2000, to the 1989 Stock Option Plan (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement on Form S-8, Registration No. 33-28605), incorporated herein by reference.
(10q)*	1995 Stock Incentive Plan (as Amended March 3, 1998) (filed as Appendix A to the Company's Proxy Statement dated March 16, 1998), incorporated herein by reference.
(10r)*	Amendment, effective May 16, 2000, to the 1995 Stock Incentive Plan (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement No. 333-63357), incorporated herein by reference.
(10s)*	Amendment No. 2, effective February 1, 2005, to the 1995 Stock Incentive Plan (filed as Exhibit 10.4 to the Current Report on Form 8-K filed by the Company on February 7, 2005) incorporated herein by reference.
(10t)*	Amended and Restated 2006 Stock Incentive Plan (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the period ended June 27, 2008), incorporated herein by reference.
(10u)*	Form of Nonqualified Stock Option Agreement, (filed as Exhibit 10t to the Company's Form 10-K Annual Report for the year ended December 31, 2004) incorporated herein by reference.
(10v)*	Form of Nonqualified Stock Option Agreement (filed as Exhibit 10.7 to the Current Report on Form 8-K filed by the Company on February 7, 2005) incorporated herein by reference.
(10w)*	Form of 2007 Restricted Stock Agreement (filed as Exhibit 10.3 to Amendment No. 1 to the Current Report on Form 8-K filed by the Company on February 16, 2007), incorporated herein by reference.
(10x)*	Form of 2008 Restricted Stock Agreement (filed as Exhibit 10ag to the Company's Annual Report on Form 10-K the year ended December 31, 2007), incorporated herein by reference.
(10y)*	Form of 2009 Restricted Stock Agreement (filed as Exhibit 10z to the Company's Annual Report on Form 10-K the year ended December 31, 2008), incorporated herein by reference.
(10z)*#	Form of 2010 Restricted Stock Agreement.
(10aa)*#	Form of 2010 Restricted Stock Units Agreement.
(10ab)*	Form of 2007 Performance Restricted Share and Performance Share Agreement (filed as Exhibit 10.4 to the Current Report on Form 8-K filed by the Company on February 16, 2007), incorporated herein by reference.
(10ac)*	Form of 2008 Performance Restricted Share and Performance Share Agreement (filed as Exhibit 10ak to the Company's Annual Report on Form 10-K for the year ended December 31, 2007), incorporated herein by reference.
(10ad)*	Form of 2006 Stock Appreciation Rights Agreement (filed as Exhibit 10.3 to the Current Report on Form 8-K filed by the Company on May 8, 2006), incorporated herein by reference.
(10ae)*	Form of 2007 Stock Appreciation Rights Agreement (filed as Exhibit 10.5 to Amendment No. 1 to the Current Report on Form 8-K filed by the Company on February 16, 2007), incorporated herein by reference.
(10af)*	Form of 2008 Stock Appreciation Rights Agreement (filed as Exhibit 10an to the Company's Annual Report on Form 10-K for the year ended December 31, 2007), incorporated herein by reference.
(10ag)*	Form of 2009 Stock Appreciation Rights Agreement (filed as Exhibit 10ag to the Company's Annual Report on Form 10-K for the year ended December 31, 2008), incorporated herein by reference.
(10ah)*#	Form of 2010 Stock Appreciation Rights Agreement.

(10ai)*	Supplemental Retirement Plan as amended and restated December 1, 1992 (filed as Exhibit 10n to the Company's Annual Report on Form 10-K for the year ended December 31, 1992), incorporated herein by reference.
(10aj)*	Amendment No. 2, adopted January 1, 1996, to Supplemental Retirement Benefit Plan as amended and restated December 1, 1992 (filed as Exhibit 10o to the Company's Annual Report on Form 10-K for the year ended December 31, 1995), incorporated herein by reference.
(10ak)*	Amendment No. 3, adopted May 5, 1998, to Supplemental Retirement Benefit Plan as amended and restated December 1, 1992 (filed as Exhibit 10s to the Company's Annual Report on Form 10-K for the year ended December 31, 1998), incorporated herein by reference.
(10al)*	Amendment No. 4, adopted December 1, 1998, to Supplemental Retirement Benefit Plan as amended and restated December 1, 1992 (filed as Exhibit 10t to the Company's Form 10-K Annual Report for the year ended December 31, 1998), incorporated herein by reference.
(10am)*	Amendment No. 5, adopted December 31, 1998, to Supplemental Retirement Benefit Plan as amended and restated December 1, 1992 (filed as Exhibit 10u to the Company's Form 10-K Annual Report for the year ended December 31, 1998), incorporated herein by reference.
(10an)*	Amendment No. 6, adopted September 1999, to Supplemental Retirement Benefit Plan as amended and restated December 1, 1992 (filed as Exhibit 10u to the Company's Form 10-K Annual Report for the year ended December 31, 2000), incorporated herein by reference.
(10ao)*	Amendment No. 7, adopted May 2000, to Supplemental Retirement Benefit Plan as amended and restated December 1, 1992 (filed as Exhibit 10v to the Company's Annual Report on Form 10-K for the year ended December 31, 2000), incorporated herein by reference.
(10ap)*	Amendment No. 8, adopted December 21, 2001, to Supplemental Retirement Benefit Plan as amended and restated December 1, 1992 (filed as Exhibit 10u to the Company's Form 10-K Annual Report for the year ended December 31, 2000), incorporated herein by reference.
(10aq)*	Amendment No. 9, adopted December 22, 2003, to Supplemental Retirement Benefit Plan as amended and restated December 1, 1992 (filed as Exhibit 10s to the Company's Form 10-K Annual Report for the year ended December 31, 2000), incorporated herein by reference.
(10ar)*	Key Employee Share Option Plan (filed as Exhibit 4.1 to the Registration Statement on Form S-8, Registration No. 333-52141, filed by Brush Wellman Inc. on May 5, 1998), incorporated herein by reference.
(10as)*	Amendment No. 1 to the Key Employee Share Option Plan, (effective May 16, 2005) (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement on Form S-8, Registration No. 333-52141), incorporated herein by reference.
(10at)*	Amendment No. 2 to the Key Employee Share Option Plan dated June 10, 2005 (filed as Exhibit 10aw to the Company's Annual Report on Form 10-K for the year ended December 31, 2006), incorporated herein by reference.
(10au)*	1997 Stock Incentive Plan for Non-employee Directors, (As Amended and Restated as of May 1, 2001) (filed as Appendix B to the Company's Proxy Statement dated March 19, 2001), incorporated herein by reference.
(10av)*	Amendment No. 1 to the 1997 Stock Incentive Plan for Non-employee Directors, (filed as Exhibit 10gg to the Company's Annual Report on Form 10-K for the year ended December 31, 2003), incorporated herein by reference.
(10aw)*	Form of Nonqualified Stock Option Agreement for Non-employee Directors (filed as Exhibit 10mm to the Company's Annual Report on Form 10-K for the year ended December 31, 2004), incorporated herein by reference.
(10ax)*	1992 Deferred Compensation Plan for Non-employee Directors (As Amended and Restated as of December 2, 1997) (filed as Exhibit 4d to the Registration Statement on Form S-8, Registration No. 333-63355, filed by Brush Wellman Inc.), incorporated herein by reference.
(10ay)*	2000 Reorganization Amendment, dated May 16, 2000, to the 1997 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 4b to Post-Effective Amendment No. 1 to Registration Statement No. 333-63353), incorporated herein by reference.

(10az)*	Amendment No. 1 (effective September 11, 2001) to the 1992 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 4c to the Company's Post-Effective Amendment No. 1 to Registration Statement No. 333-74296), incorporated herein by reference.
(10ba)*	Amendment No. 2 (effective September 13, 2004) to the 1992 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended October 1, 2004), incorporated herein by reference.
(10bb)*	Amendment No. 3 (effective January 1, 2005) to the 1992 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 10rr to the Company's Annual Report on Form 10-K for the year ended December 31, 2004), incorporated herein by reference.
(10bc)*	Amendment No. 4 (effective April 1, 2009) to the 1992 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 10bb to the Company's Annual Report on Form 10-K for the year ended December 31, 2008), incorporated herein by reference.
(10bd)*	Amended and Restated 2005 Deferred Compensation Plan for Non-employee Directors (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended September 26, 2008), incorporated herein by reference.
(10be)*	Amended and Restated 2006 Non-employee Director Equity Plan (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended September 26, 2008), incorporated herein by reference.
(10bf)*	Amended and Restated Executive Deferred Compensation Plan II (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 28, 2008), incorporated herein by reference.
(10bg)*	Amendment No. 1 to the Amended and Restated Executive Deferred Compensation Plan II (filed as Exhibit 10bf to the Company's Annual Report on Form 10-K for the year ended December 31, 2008), incorporated herein by reference.
(10bh)*	Amendment No. 2 to the Amended and Restated Executive Deferred Compensation Plan II (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended July 3, 2009), incorporated herein by reference.
(10bi)*	Trust Agreement between the Company and Fidelity Investments dated September 26, 2006 for certain deferred compensation plans for Non-employee Directors of the Company (filed as Exhibit 99.4 to the Current Report on Form 8-K filed by the Company on September 29, 2006), incorporated herein by reference.
(10bj)*	Trust Agreement between the Company and Fidelity Management Trust Company, dated June 25, 2009 relating to the Executive Deferred Compensation Plan II (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended July 3, 2009), incorporated herein by reference.
(10bk)*	Trust Agreement between the Company and Fifth Third Bank dated September 25, 2006 relating to the Key Employee Share Option Plan (filed as Exhibit 99.3 to the Current Report on Form 8-K filed by the Company on September 29, 2006), incorporated herein by reference.
(10bl)	Lease dated as of October 1, 1996, between Brush Wellman Inc. and Toledo-Lucas County Port Authority (filed as Exhibit 10v to the Company's Annual Report on Form 10-K for the year ended December 31, 1996), incorporated herein by reference.
(10bm)	Amended and Restated Inducement Agreement with the Prudential Insurance Company of America dated May 30, 2003 (filed as Exhibit 10 to the Company's Quarterly Report on Form 10-Q for the period ended June 27, 2003), incorporated herein by reference.
(10bn)	Amended and Restated Supply Agreement between RWE Nukem, Inc. and Brush Wellman Inc. for the sale and purchase of beryllium products (filed as Exhibit 10 to the Company's Quarterly Report on Form 10-Q for the period ended September 26, 2003), incorporated herein by reference.
(10bo)	Supply Agreement between the Defense Logistics Agency and Brush Wellman Inc. for the sale and purchase of beryllium products (filed as Exhibit 10tt to the Company's Annual Report on Form 10-K for the year ended December 31, 2004), incorporated herein by reference.
(10bp)	Asset Purchase Agreement by and between Williams Advanced Materials Inc. and Techni-Met, Inc. dated December 20, 2007 (filed as Exhibit 10bw to the Company's Annual Report on Form 10-K for the year ended December 31, 2007), incorporated herein by reference.

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(10bq)	Consignment Agreement dated October 2, 2009 between Brush Engineered Materials Inc. and Canadian Imperial Bank of Commerce (filed as Exhibit 10.1 to the Company's Form 8-K on October 8, 2009), incorporated herein by reference.
(21)	Subsidiaries of the Registrant
(23)	Consent of Ernst & Young LLP
(24)	Power of Attorney
(31.1)	Certification of Chief Executive Officer required by Rule 13a-14(a) or 15d-14(a)
(31.2)	Certification of Chief Financial Officer required by Rule 13a-14(a) or 15d-14(a)
(32.1)	Certification of Chief Executive Officer and Chief Financial Officer required by 18 U.S.C. Section 1350

* Denotes a compensatory plan or arrangement.

Filed herewith

SIGNATURES

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

BRUSH ENGINEERED MATERIALS INC.

By: /s/ RICHARD J. HIPPLE

Richard J. Hipple
Chairman of the Board, President
and Chief Executive Officer

By: /s/ JOHN D. GRAMPA

John D. Grampa
Senior Vice President Finance
and Chief Financial Officer

March 8, 2010

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

/s/ RICHARD J. HIPPLE Richard J. Hipple	Chairman of the Board, President, Chief Executive Officer and Director (Principal Executive Officer)	March 8, 2010
/s/ JOHN D. GRAMPA John D. Grampa	Senior Vice President Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	March 8, 2010
/s/ ALBERT C. BERSTICKER* Albert C. Bersticker*	Director	March 8, 2010
/s/ JOSEPH P. KEITHLEY* Joseph P. Keithley*	Director	March 8, 2010
/s/ VINOD M. KHILNANI* Vinod M. Khilnani*	Director	March 8, 2010
/s/ WILLIAM B. LAWRENCE* William B. Lawrence*	Director	March 8, 2010
/s/ WILLIAM P. MADAR* William P. Madar*	Director	March 8, 2010
/s/ WILLIAM G. PRYOR* William G. Pryor*	Director	March 8, 2010
/s/ N. MOHAN REDDY* N. Mohan Reddy*	Director	March 8, 2010
/s/ WILLIAM R. ROBERTSON* William R. Robertson*	Director	March 8, 2010
/s/ JOHN SHERWIN, JR.* John Sherwin, Jr.*	Director	March 8, 2010
/s/ CRAIG S. SHULAR* Craig S. Shular*	Director	March 8, 2010

* The undersigned, by signing his name hereto, does sign and execute this report on behalf of each of the above-named officers and directors of Brush Engineered Materials Inc., pursuant to Powers of Attorney executed by each such officer and director filed with the Securities and Exchange Commission.

By: /s/ JOHN D. GRAMPA

John D. Grampa
Attorney-in-Fact

March 8, 2010

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

Years Ended December 31, 2009, 2008 and 2007

COL. A	COL. B	COL. C		COL. D	COL. E
DESCRIPTION	Balance at Beginning of Period	ADDITIONS		Deduction- Describe	Balance at End of Period
		(1)	(2)		
		Charged to Costs and Expenses	Charged to Other Accounts-Describe		
Year ended December 31, 2009					
Deducted from asset accounts:					
Allowance for doubtful accounts receivable	\$ 1,051,000	\$ (173,000)	\$ 486,000(A)	\$ (33,000)(B)	\$ 1,397,000
Inventory reserves and obsolescence	\$ 3,629,000	\$ 2,221,000	\$ 235,000(A)	\$ 1,857,000(C)	\$ 4,228,000
Year ended December 31, 2008					
Deducted from asset accounts:					
Allowance for doubtful accounts receivable	\$ 1,120,000	\$ 142,000	\$ 0	\$ 211,000(B)	\$ 1,051,000
Inventory reserves and obsolescence	\$ 3,348,000	\$ 3,551,000	\$ 0	\$ 3,270,000(C)	\$ 3,629,000
Year ended December 31, 2007					
Deducted from asset accounts:					
Allowance for doubtful accounts receivable	\$ 1,822,000	\$ (300,000)	\$ 0	\$ 402,000(B)	\$ 1,120,000
Inventory reserves and obsolescence	\$ 4,455,000	\$ 2,744,000	\$ 0	\$ 3,851,000(C)	\$ 3,348,000

Note (A) — Beginning balance from acquisition

Note (B) — Bad debts written-off, net of recoveries

Note (C) — Inventory write-off

**AMENDMENT NO. 2
TO
SECOND AMENDED AND RESTATED PRECIOUS METALS AGREEMENT**

THIS AMENDMENT NO. 2 TO SECOND AMENDED AND RESTATED PRECIOUS METALS AGREEMENT (this “**Amendment**”) is made as of June 25, 2008, by and among THE BANK OF NOVA SCOTIA, a Canadian chartered bank (the “**Metal Lender**”); BRUSH ENGINEERED MATERIALS INC., an Ohio corporation (“**BEM**”); WILLIAMS ADVANCED MATERIALS INC., a New York corporation (“**WAM**”); TECHNICAL MATERIALS, INC., an Ohio corporation (“**TMI**”); BRUSH WELLMAN INC., an Ohio corporation (“**BWI**”); ZENTRIX TECHNOLOGIES INC., an Arizona corporation (“**ZTI**”); WILLIAMS ACQUISITION, LLC, a New York limited liability company d/b/a Pure Tech (“**Pure Tech**”); THIN FILM TECHNOLOGY, INC., a California corporation (“**TFT**”), TECHNI-MET, INC., a Connecticut corporation (“**Techni-Met**”) and such other Subsidiaries of BEM who may from time to time become parties by means of their execution and delivery with the Metal Lender of a Joinder Agreement under the Precious Metals Agreement (as defined below). BEM, WAM, TMI, BWI, ZTI, Pure Tech, TFT, Techni-Met and such Subsidiaries are herein sometimes referred to collectively as the “**Customers**” and each individually as a “**Customer**”.

WITNESSETH:

WHEREAS, the Metal Lender and the Customers are parties to a certain Second Amended and Restated Precious Metals Agreement, dated as of December 28, 2007, as amended by a certain Amendment No. 1 to Second Amended and Restated Precious Metals Agreement, dated as of March 3, 2008 (as amended, the “**Precious Metals Agreement**”); and

WHEREAS, the parties hereto desire to amend certain provisions of the Precious Metals Agreement as hereinafter provided;

NOW, THEREFORE, for value received and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto hereby amend the Precious Metals Agreement and agree, effective as of the date first written above, as follows:

1. The definition of “**Approved Subconsignee Locations**” appearing in Article 1 of the Precious Metals Agreement is hereby amended and restated in its entirety to read as follows:

“**Approved Subconsignee Locations**” means, collectively, the locations described in **Schedule 1** attached hereto, as it may be amended by the parties from time to time, and each other location approved by the Metal Lender in writing from time to time, where Consigned Precious Metal may be located while in the possession of Approved Subconsignees.

2. Schedule 1 (Approved Locations) to the Precious Metals Agreement is hereby amended by adding the following entries under the heading "Approved Subconsignees and Approved Subconsignee Locations":

International Rectifier
a Hexfet America Facility
41915 Business Park Drive
Temecula, California 92590

International Rectifier
Cardiff Road
Newport
South Wales, England NP10 8YJ

3. To induce the Metal Lender to enter into this Amendment, each Customer hereby represents and warrants to the Metal Lender that: (a) such Customer has full power and authority, and has taken all action necessary, to execute and deliver this Amendment and to fulfill its obligations hereunder and to consummate the transactions contemplated hereby; (b) the making and performance by such Customer of this Amendment do not and will not violate any law or regulation of the jurisdiction of its organization or any other law or regulation applicable to it; (c) this Amendment has been duly executed and delivered by such Customer and constitutes the legal, valid and binding obligation of such Customer, enforceable against it in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency or similar laws affecting the enforcement of creditors' rights generally and except as the same may be subject to general principles of equity; and (d) on and as of the date hereof, no Default or Event of Default exists under the Precious Metals Agreement.

4. This Amendment shall be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and performed in such State.

5. The Precious Metals Agreement, as amended hereby, together with the other Precious Metal Documents, is intended by the parties as the final, complete and exclusive statement of the transactions evidenced by the Precious Metals Agreement. All prior or contemporaneous promises, agreements and understandings, whether oral or written, are deemed to be superseded by the Precious Metals Agreement, as amended hereby, and no party is relying on any promise, agreement or understanding not set forth in the Precious Metals Agreement, as amended hereby. The Precious Metals Agreement, as amended hereby, may not be amended or modified except by a written instrument describing such amendment or modification executed by the Customers and the Metal Lender. The parties hereto agree that this Amendment shall in no manner affect or impair the liens and security interests evidenced or granted by the Precious Metals Agreement or in connection therewith.

6. Except as amended hereby, the Precious Metals Agreement shall remain in full force and effect and is in all respects hereby ratified and affirmed.

7. The Customers covenant and agree jointly and severally to pay all out-of-pocket expenses, costs and charges incurred by the Metal Lender (including reasonable fees and

disbursement of counsel) in connection with the review and implementation of this Amendment, up to a maximum of \$500.

8. This Amendment may be executed by the parties hereto in several counterparts hereof and by the different parties hereto on separate counterparts hereof, each of which shall be an original and all of which shall together constitute one and the same agreement. Delivery of an executed signature page of this Amendment by electronic transmission shall be effective as an in hand delivery of an original executed counterpart hereof.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned parties have caused this Amendment to be executed by their duly authorized officers as of the date first written above.

CUSTOMERS :

BRUSH ENGINEERED MATERIALS INC.

By: _____
Name: _____
Title: _____

TECHNICAL MATERIALS, INC.

By: _____
Name: _____
Title: _____

ZENTRIX TECHNOLOGIES INC.

By: _____
Name: _____
Title: _____

THIN FILM TECHNOLOGY, INC.

By: _____
Name: _____
Title: _____

METAL LENDER :

THE BANK OF NOVA SCOTIA

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

WILLIAMS ADVANCED MATERIALS INC.

By: _____
Name: _____
Title: _____

BRUSH WELLMAN INC.

By: _____
Name: _____
Title: _____

WILLIAMS ACQUISITION, LLC

By: _____
Name: _____
Title: _____

TECHNI-MET, INC.

By: _____
Name: _____
Title: _____

**AMENDMENT NO. 4
TO
SECOND AMENDED AND RESTATED PRECIOUS METALS AGREEMENT**

THIS AMENDMENT NO. 4 TO SECOND AMENDED AND RESTATED PRECIOUS METALS AGREEMENT (this “**Amendment**”) is made as of February 11, 2010, by and among THE BANK OF NOVA SCOTIA, a Canadian chartered bank (the “**Metal Lender**”); BRUSH ENGINEERED MATERIALS INC., an Ohio corporation (“**BEM**”); WILLIAMS ADVANCED MATERIALS INC., a New York corporation (“**WAM**”); TECHNICAL MATERIALS, INC., an Ohio corporation (“**TMI**”); BRUSH WELLMAN INC., an Ohio corporation (“**BWI**”); ZENTRIX TECHNOLOGIES INC., an Arizona corporation (“**ZTI**”); WILLIAMS ACQUISITION, LLC, a New York limited liability company d/b/a Pure Tech (“**Pure Tech**”); THIN FILM TECHNOLOGY, INC., a California corporation (“**TFT**”); TECHNI-MET, LLC, a Delaware limited liability company (“**Techni-Met**”); ACADEMY CORPORATION, a New Mexico corporation (“**AC**”); ACADEMY GALLUP, LLC, a New Mexico limited liability company (“**AG**”); and such other Subsidiaries of BEM that may from time to time become parties by means of their execution and delivery with the Metal Lender of a Joinder Agreement under the Precious Metals Agreement (as defined below). BEM, WAM, TMI, BWI, ZTI, Pure Tech, TFT, Techni-Met AC, AG and such Subsidiaries are herein sometimes referred to collectively as the “**Customers**” and each individually as a “**Customer**”.

WITNESSETH:

WHEREAS, the Metal Lender and the Customers are parties to a certain Second Amended and Restated Precious Metals Agreement, dated as of December 28, 2007, as amended by a certain Amendment No. 1 to Second Amended and Restated Precious Metals Agreement, dated as of March 3, 2008, a certain Amendment No. 2 to Second Amended and Restated Precious Metals Agreement, dated as of June 25, 2008, and a certain Amendment No. 3 to Second Amended and Restated Precious Metals Agreement, dated as of October 2, 2009 (as amended, the “**Precious Metals Agreement**”); and

WHEREAS, the parties hereto desire to amend certain provisions of the Precious Metals Agreement as hereinafter provided;

NOW, THEREFORE, for value received and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto hereby amend the Precious Metals Agreement and agree, effective as of the date first written above, as follows:

1. Defined Terms. Initially capitalized terms used but not defined in this Amendment have the meanings given to them in the Precious Metals Agreement.

2. Amendments.

(a) The definition of “Stored Precious Metal Limit” appearing in Section 1 of the Precious Metals Agreement is hereby amended and restated in its entirety to read as follows:

“Stored Precious Metal Limit” means the least of (a) \$37,500,000, (b) the value (as determined in accordance with **Section 2.02** hereof) of 25,000 ounces of Gold, and (c) the amount of insurance coverage obtained and in effect from time to time with respect to Stored Precious Metal pursuant to **Section 4.07** hereof.

(b) The following terms and associated definitions are hereby deleted in their entirety from the Precious Metals Agreement: “Forward Contract(s),” “Forward Contract Exposure,” “Forward Contract Facility,” and “Forward Contract Limit.” From and after the date of this Amendment, any and all references in the Precious Metals Agreement to “Forward Contract” or “Forward Contracts” shall be deemed to be references to “Hedging Transaction” and “Hedging Transactions,” respectively; any and all references to “Forward Contract Exposure” shall be deemed to be references to “Net Marked-to-Market Exposure;” and any and all references to “Forward Contract Facility” shall be deemed to be references to “Hedging Transaction Facility.”

(c) The following new terms and associated definitions are hereby inserted into Section 1 (Definitions) of the Precious Metals Agreement in proper alphabetical order:

“Approved Storage Facility Location(s)” means the Premises of any of the Customers located in the continental United States and listed under the appropriate heading on Schedule 1 attached hereto, as it may be amended by the parties from time to time, and each other location located in the continental United States approved by the Metal Lender in writing from time to time.

“Hedging Transaction” means any transaction (including any agreement with respect thereto) now existing or hereafter entered into by a Customer and the Metal Lender which is a swap, forward, option, cap, floor, collar, cross-currency transaction or other similar transaction (including any option with respect to any of these transactions) or any combination thereof, whether linked to one or more Consignments, interest rates, price indices or other financial measures, which is designed to hedge or mitigate risks to which a Customer has exposure with respect to Precious Metal.

“Hedging Transaction Facility” means the facility established pursuant to **Section 5** hereof whereby the Customers may from time to time enter into Hedging Transactions with the Metal Lender.

“Net Marked-to-Market Exposure” means, as of any date of determination, the excess (if any) of all unrealized losses over all unrealized profits of the Customers arising from Hedging Transactions. As used in this definition, “unrealized losses” means the fair market value of the costs to a Customer of replacing such

Hedging Transaction as of the date of determination (assuming the Hedging Transaction were to be terminated as of that date), and “unrealized profits” means the fair market value of the gain to such Customer of replacing such Hedging Transaction as of the date of determination (assuming such Hedging Transaction were to be terminated as of that date), in each case, as reasonably determined and communicated by the Metal Lender and, to the extent applicable to the particular Hedging Transaction, using the value of underlying Precious Metal calculated in accordance with **Section 2.02** hereof.

(d) Section 4 of the Precious Metals Agreement is hereby amended and restated in its entirety to read as set forth in Annex I hereto.

(e) Section 5 of the Precious Metals Agreement is hereby amended and restated in its entirety to read as set forth in Annex II hereto.

(f) Section 7.03 of the Precious Metals Agreement is hereby amended and restated in its entirety to read as follows:

As continuing security for the prompt and punctual payment and performance of all Obligations, the Customer Agent shall cause one or more Letters of Credit to be issued for the benefit of the Metal Lender to the extent required by **Sections 5.01** and **9.22** hereof, and maintain such Letters of Credit at all times until payment in full of the Obligations and termination of the Metal Lender's obligations hereunder.

(g) Section 10.01(n) of the Precious Metals Agreement is hereby amended and restated in its entirety to read as follows:

the Customers shall fail to renew or replace any Letter of Credit securing this Agreement, or any extension(s) or replacement (s) therefor, at least ten (10) Business Days prior to its scheduled expiry date, if any, unless the Customers have demonstrated to the Metal Lender's reasonable satisfaction that the loss of such Letter of Credit is adequately offset by other existing Letters of Credit and other Collateral and will not result in an Event of Default with respect to **Section 5.01** or **9.22** hereof; or the issuer of any Letter of Credit shall seek to modify, revoke or terminate its liability under a Letter of Credit, or any governmental agency shall seek to limit, defer, postpone or terminate the Metal Lender's rights or the issuer's liability under a Letter of Credit, unless the Customers have replaced such Letter of Credit with a substitute Letter of Credit within ten (10) Business Days or have demonstrated to the Metal Lender's reasonable satisfaction that the loss of such Letter

of Credit is adequately offset by other Collateral and will not result in an Event of Default under **Section 5.01** or **9.22** hereof;

(h) Schedule 1 to the Precious Metals Agreement is hereby amended and restated in its entirety to read as set forth in Annex III hereto.

3. Representations and Warranties. To induce the Metal Lender to enter into this Amendment, each Customer hereby represents and warrants to the Metal Lender that: (a) such Customer has full power and authority, and has taken all action necessary, to execute and deliver this Amendment and to fulfill its obligations hereunder and to consummate the transactions contemplated hereby; (b) the making and performance by such Customer of this Amendment do not and will not violate any law or regulation of the jurisdiction of its organization or any other law or regulation applicable to it; (c) this Amendment has been duly executed and delivered by such Customer and constitutes the legal, valid and binding obligation of such Customer, enforceable against it in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency or similar laws affecting the enforcement of creditors' rights generally and except as the same may be subject to general principles of equity; and (d) on and as of the date hereof, no Default or Event of Default exists under the Precious Metals Agreement.

4. Governing Law. This Amendment shall be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and performed in such State.

5. Integration of Amendment into Precious Metals Agreement. The Precious Metals Agreement, as amended hereby, together with the other Precious Metal Documents, is intended by the parties as the final, complete and exclusive statement of the transactions evidenced by the Precious Metals Agreement. All prior or contemporaneous promises, agreements and understandings, whether oral or written, are deemed to be superseded by the Precious Metals Agreement, as amended hereby, and no party is relying on any promise, agreement or understanding not set forth in the Precious Metals Agreement, as amended hereby. The Precious Metals Agreement, as amended hereby, may not be amended or modified except by a written instrument describing such amendment or modification executed by the Customers and the Metal Lender. The parties hereto agree that this Amendment shall in no manner affect or impair the liens and security interests evidenced or granted by the Precious Metals Agreement or in connection therewith. Except as amended hereby, the Precious Metals Agreement shall remain in full force and effect and is in all respects hereby ratified and affirmed.

6. Expenses. The Customers covenant and agree jointly and severally to pay all reasonable out-of-pocket expenses, costs and charges incurred by the Metal Lender (including reasonable fees and disbursement of counsel) in connection with the review and implementation of this Amendment.

7. Signatures. This Amendment may be executed by the parties hereto in several counterparts hereof and by the different parties hereto on separate counterparts hereof, each of which shall be an original and all of which shall together constitute one and the same agreement. Delivery of an executed signature page of this Amendment by electronic transmission shall be effective as an in hand delivery of an original executed counterpart hereof.

IN WITNESS WHEREOF, the undersigned parties have caused this Amendment to be executed by their duly authorized officers as of the date first written above.

CUSTOMERS:

BRUSH ENGINEERED MATERIALS INC.

By: _____
Michael C. Hasychak
Vice President, Treasurer and
Secretary

TECHNICAL MATERIALS, INC.

By: _____
Michael C. Hasychak
Vice President, Treasurer and
Secretary

ZENTRIX TECHNOLOGIES INC.

By: _____
Michael C. Hasychak
Chief Financial Officer and Secretary

THIN FILM TECHNOLOGY, INC.

By: _____
Gary W. Schiavoni
Secretary

ACADEMY CORPORATION

By: _____
Richard W. Sager
President

METAL LENDER:

THE BANK OF NOVA SCOTIA

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

**WILLIAMS ADVANCED MATERIALS
INC.**

By: _____
Michael C. Hasychak
Vice President, Treasurer and
Secretary

BRUSH WELLMAN INC.

By: _____
Michael C. Hasychak
Vice President, Treasurer and
Secretary

WILLIAMS ACQUISITION, LLC

By: _____
Michael C. Hasychak
Treasurer

TECHNI-MET, LLC

By: _____
Gary W. Schiavoni
Asst. Secretary and Asst. Treasurer

ACADEMY GALLUP, LLC

By: _____
Richard W. Sager
Manager

ANNEX I

AMENDED AND RESTATED SECTION 4

4. SEGREGATED STORAGE FACILITIES.

Section 4.01 Segregated Storage Facilities .

The Metal Lender may elect in its sole discretion from time to time to deliver to WAM or any other Customer identifiable Precious Metal pursuant to this **Section 4** (" **Stored Precious Metal** "); provided, however, that unless the Metal Lender shall otherwise agree, (a) the Stored Precious Metal shall be delivered in such amounts as may be requested by WAM or the applicable Customer provided that the aggregate value of all Stored Precious Metal outstanding and subject to this **Section 4** and valued in accordance with the provisions of **Section 2.02** hereof shall not exceed the Stored Precious Metal Limit at any time, and (b) deliveries of Stored Precious Metal shall occur no more frequently than on a weekly basis. Upon delivery of the Precious Metal to a Customer pursuant to this **Section 4.01**, WAM or the applicable Customer will sign and return to the Metal Lender a receipt for the Precious Metal so delivered, which receipt shall indicate that the Precious Metal constitutes Stored Precious Metal held for the Metal Lender's account pursuant to the terms of this **Section 4**. WAM or the applicable Customer will hold the Stored Precious Metal in a safekeeping vault at an Approved Storage Facility Location, segregated from all other material and precious metal it may hold and clearly marked as belonging to the Metal Lender (each, a " **Segregated Storage Facility** "), and WAM or the applicable Customer will indicate in its books and records that the Stored Precious Metal is owned by and belongs to the Metal Lender and is being held for the Metal Lender's account pursuant to the terms of this **Section 4**. Except as hereinafter provided, title to the Stored Precious Metal will at all times remain solely in the Metal Lender, and no Customer: (a) will acquire any interest in the Stored Precious Metal except as hereinafter permitted; (b) except as permitted elsewhere in this **Section 4**, will remove the Stored Precious Metal from a Segregated Storage Facility; and (c) will create or incur, any Lien whatsoever on any of the Stored Precious Metal, other than any Lien that is subject to one of the Intercreditor Agreements or otherwise claimed by or granted by the Metal Lender. Except as hereinafter provided, the Stored Precious Metal will not become part of any Customer's Inventory for any purposes.

Section 4.02 Periodic Removal of Storage Metal .

Upon notifying the Metal Lender using the Metal Lender's approved notice procedures, a Customer may remove Stored Precious Metal from its Segregated Storage Facility in such quantities as may be required by such Customer for its manufacturing operations; provided, however, all quantities of Stored Precious Metal so removed from a Segregated Storage Facility: (a) shall immediately and without further action become and be deemed to constitute Consigned Precious Metal under **Section 2** of this Agreement and shall be subject to all of the terms and conditions of this Agreement, including **Section 2** hereof; or (b) shall be paid for in full upon terms agreed to at such time by the Customer and the Metal Lender. If, following removal of the Stored Precious Metal from a Segregated Storage Facility and its designation as Consigned

Precious Metal pursuant to **Section 2** of this Agreement, the Consignment Limit is exceeded, the Customers will promptly and without further notice from or demand by the Metal Lender, take such action as is required by **Section 2.09** hereof to reduce the amount of Consigned Precious Metal outstanding pursuant to the Consignment Facility to an amount at or below the Consignment Limit.

Section 4.03 Removal of Stored Precious Metal at Request of the Metal Lender .

From time to time, the Metal Lender may provide the Customers with reasonable written instructions specifying that a quantity of Stored Precious Metal must be delivered to the Metal Lender or to a designated third party located in the continental United States and within a 100-mile radius of where such Stored Precious Metal is then located. The Customers shall promptly following receipt of such instructions perform in accordance with such instructions. Except as provided in **Section 4.02** hereof, a Customer may only remove Stored Precious Metal from safekeeping in order to deliver such Stored Precious Metal to the Metal Lender or to a third party in accordance with the Metal Lender's written instructions. A Customer may only transfer Stored Precious Metal to a third party for the Metal Lender's account pursuant to the terms of this Agreement notwithstanding the fact that such Customer may hold other Precious Metal for the Metal Lender's account.

Section 4.04 Stored Precious Metal Not Subject to Fees .

None of the Customers, on the one hand, nor the Metal Lender, on the other hand, shall be required to pay to the other any consignment fees, gold loan fees, market premiums or any other fees with respect to the Stored Precious Metal while it is in a Segregated Storage Facility, and no consignment fees shall be imposed until such time as a Customer removes Stored Precious Metal from its Segregated Storage Facility pursuant to the provisions of **Section 4.02** hereof.

Section 4.05 Access to Segregated Storage Facility .

The Customers will at all times provide to the Metal Lender access to each Segregated Storage Facility and to its related premises and related books and records during regular business hours, with or without notice, in order to permit the Metal Lender to verify the Customers' compliance with the terms of this **Section 4** . While on any Customer's Premises, the Metal Lender shall follow all generally applicable safety, health and security policies.

Section 4.06 Security Interest .

The Customers and the Metal Lender agree and intend that all Stored Precious Metal within a Segregated Storage Facility shall be owned solely by the Metal Lender. Each Customer hereby grants to the Metal Lender a security interest in all right, title and interest of such Customer, if any, in, under and to the Stored Precious Metal to secure the payment and performance of all Obligations contained in this Agreement, including, without limitation, the provisions of this **Section 4** . The Customers hereby agree that the Metal Lender is authorized to prepare and file any Uniform Commercial Code financing statements and continuations thereof reasonably deemed necessary or appropriate by the Metal Lender to evidence its ownership interest and security interest in the Stored Precious Metal. All such financing statements

heretofore filed by the Metal Lender against any of the Customers with respect to this Agreement are hereby ratified.

Section 4.07 Risk of Loss.

The Customers will be liable to the Metal Lender for any theft, loss or conversion of any Stored Precious Metal held pursuant to the terms of this **Section 4** or for any casualty to any Stored Precious Metal held pursuant to the terms of this **Section 4** and will maintain in full force and effect insurance conforming to that required pursuant to **Section 2.01(d)** hereof in an amount sufficient to cover the Stored Precious Metal and naming the Metal Lender as a loss payee and as an additional insured as its interest may appear, and will deliver to the Metal Lender proof that such insurance is in full force and effect prior to the first shipment of Stored Precious Metal pursuant to the terms of this **Section 4**.

Section 4.08 Waiver of Setoff.

Each Customer hereby waives any and all Liens, rights of setoff or other claims against the Stored Precious Metal held for the Metal Lender pursuant to the terms of this **Section 4**.

Section 4.09 Termination of Segregated Storage Facilities.

All Segregated Storage Facilities shall terminate on the Maturity Date or on such earlier date as the Metal Lender accelerates the Obligations by reason of the occurrence of an Event of Default hereunder. In addition, the Customers, on the one hand, or the Metal Lender, on the other hand, may at any time on thirty (30) days prior written notice to the other terminate any particular Segregated Storage Facility. Upon termination of a Segregated Storage Facility, the Customers shall return at their sole expense and risk to the Metal Lender in accordance with the Metal Lender's reasonable written instruction all Stored Precious Metal therein. Termination of any particular Segregated Storage Facility shall not affect any Customer's duty to perform its obligations to the Metal Lender under this **Section 4**.

* * * * *

Annex I-3

ANNEX II

AMENDED AND RESTATED SECTION 5

5. HEDGING TRANSACTIONS .

Section 5.01 Hedging Transactions .

The Customers and the Metal Lender may from time to time enter into Hedging Transactions in form and substance and on terms, including pricing, as are mutually satisfactory to the Customers and the Metal Lender, so long as at such time (a) no Default has occurred and is continuing, (b) the aggregate stated face value or notional amount, as applicable, of all Hedging Transactions then in effect does not exceed \$20,000,000, and (c) one or more Letters of Credit are in effect at such time having an aggregate undrawn face amount equal to or greater than the sum of (x) one hundred five percent (105%) of the Net Marked-to-Market Exposure of all Hedging Transactions then in effect, plus (y) any Refining Reserve to the extent required by **Section 9.22** hereof. If at any time, the aggregate undrawn face amount of all Letters of Credit is insufficient to satisfy the condition in **Section 5.10(c)**, then the Customers will promptly, without further notice or demand by the Metal Lender, (a) make payment to the Metal Lender, (b) amend one or more Hedging Transactions, (c) increase the face amount of one or more Letters of Credit then in effect, or (d) enter into any combination of the foregoing, in any case, to cause such condition to be satisfied. Unless otherwise agreed by the Metal Lender, no Hedging Transaction shall have a maturity in excess of twelve (12) months or later than the Maturity Date.

Section 5.02 Late Fee; Default Rate on Obligations .

(a) If the entire amount of a required payment under a Hedging Transaction is not paid in full within ten (10) Business Days after the same is due, the Customers shall pay to the Metal Lender to the extent permitted by law by bank wire sent to a bank of such Metal Lender's choice, a late fee equal to five percent (5%) of the required payment.

(b) Except as otherwise provided in any particular Hedging Transaction, each Customer hereby agrees to pay to the Metal Lender by bank wire sent to a bank of the Metal Lender's choice or by bank check, upon demand, to the extent permitted by law, interest on any sum or amount not paid when due under any Hedging Transaction at a rate per annum equal to the Prime Rate, plus two percent (2%), from the date of delinquency until payment in full. Interest shall be calculated on the basis of a 360-day year counting the actual number of days elapsed. Each change in the Prime Rate charged shall be effective upon each date the Prime Rate changes.

Section 5.03 Payments .

Each Customer hereby authorizes the Metal Lender to charge such Customer's account, at any time and from time to time for the purpose of paying any amounts which are at any time payable by the Customers under this **Section 5**. Accordingly, all payments to be made by the Customer under **Section 5** may be automatically debited to such account.

Section 5.04 Termination .

The Hedging Transaction Facility shall terminate on the Maturity Date or on such earlier date as the Metal Lender terminates the Hedging Transaction Facility either (a) by reason of the occurrence and continuance of an Event of Default, or (b) by the Metal Lender giving to the Customers not less than thirty (30) days prior written notice of its decision to terminate the Hedging Transaction Facility. Notwithstanding termination, any then outstanding Hedging Transactions shall continue pursuant to their terms, and until all Obligations have been fully satisfied (except for those specific covenants and conditions dealing with entering into new Hedging Transactions), all terms and conditions of this Agreement shall remain in full force and effect.

Section 5.05 Security .

All Obligations under this **Section 5** and under all Hedging Transactions shall be secured by all security interests granted by this Agreement and by all Security Documents, and are subject to the Security Documents.

* * * * *

Annex II-2

ANNEX II
AMENDED AND RESTATED SCHEDULE 1 (APPROVED LOCATIONS)

SCHEDULE I
APPROVED LOCATIONS

Approved Domestic Locations

Williams Advanced Materials Inc.
2978 Main Street
Buffalo, New York 14214

Williams Advanced Materials Inc.
2080 Lockport Road
Wheatfield, New York 14304

Williams Acquisition, LLC
42 Mt. Ebo Road South
Brewster, New York 10509

Thin Film Technology
153 Industrial Way
Buellton, CA 93427

Zentrix Technologies Inc.
Newburyport Industrial Park
22 Graf Road
Newburyport, Massachusetts 01950

Brush Wellman Inc.
14710 W. Portage River South Rd.
Elmore, Ohio 43416-9502

Academy Corporation
6905 Washington Avenue NE
Albuquerque, New Mexico 87109

Academy Corporation
5520 Midway Park Place NE
Albuquerque, New Mexico 87109

Academy Gallup, LLC
1257 North Highway 491
Gallup, New Mexico 87301

Approved Foreign Locations

Far East PTE LTD.
110 Paya Lebar Road #02-01
Singapore Warehouse
Singapore 409009

Far East PTE LTD.
10 Arumugan Rd.
Lion Industrial Bldg.
Singapore Warehouse
Singapore 4099957

Technical Materials, Inc.
5 Wellington Road
Lincoln, Rhode Island 02865

Techni-Met, LLC
300 Lamberton Road
Windsor, Connecticut 06095

Techni-Met, LLC
30 East Newberry Rd.
Bloomfield, Connecticut 06002

Cerac, inc. (a Williams Advanced Materials site)
404-407 N. 13th St. and
1316 W. St. Paul St.
Milwaukee, Wisconsin 53233

Williams Advanced Materials Inc.
3500 Thomas Rd, Suite C
Santa Clara, California 95054

Brush Wellman Inc.
27555 College Park Drive
Warren, Michigan 48088

Academy Corporation
5531 Midway Park Place NE
Albuquerque, New Mexico 87109

Academy Corporation
5941 Midway Park Place NE
Albuquerque, New Mexico 87109

OMC Scientific Czech, sro
Prumyslova ul.
440 01 Louny
Czech Republic

Seagate
1 Disc Drive
Springtown Industrial Estate
Londonderry, Northern Ireland
BT48 OBF United Kingdom

WAM Taiwan Co. Ltd.
No. 19 Zhongxing 1st St.
Luzhu Shiang, Taoyuan County
Taiwan, ROC

OMC Scientific
Ballysimon Road
Limerick, Ireland

Williams Advanced Material (Suzhou) Ltd.
No. 28, Su Tong Road
Suzhou Industrial Park
China 215021

Williams Advanced Materials — Philippines
Bldg. 8365 Argonaut Highway
Cubi Pt.
Subic Bay Freeport Zone
Philippines 2222

Approved Refiners / Fabricators

Coining of America
280 Midland Avenue
Saddle Brook, New Jersey 07663

Sigmund Cohn Corp.
121 South Columbus Avenue
Mount Vernon, New York 10553

Sofield Mfg.
2 Main Street
Ridgefield Park, New Jersey 07660

NuTec Metal Joining Products
12999 Plaza Drive
Cleveland, Ohio 44193

BASF Catalysts, LLC
554 Engelhard Drive
Seneca, South Carolina 29679

Heraeus Metal Processing, Inc.
13429 Alondra Blvd.
Santa Fe Springs, California 90670

Johnson Matthey Limited
130 Glidden Road
Brampton, Ontario, Canada L6W 3M8

Johnson Matthey
Orchard Road
Royston, Hertfordshire, England SG8 5HE

Johnson Matthey
2001 Nolte Drive
West Deptford, New Jersey 08066

Rohm & Haas Electric Materials LLC
272 Buffalo Avenue
Freeport, New York 11520

Sabin Metal Corp.
300 Pantigo Place
East Hampton, New York 11937

Seagate Technology
7801 Computer Ave.
Bloomington, MN 55435

Approved Subconsignees and Approved Subconsignee Locations

Honeywell
830 Arapaho Road
Richardson, Texas 75081

Triquint Semiconductor
500 W. Renner Road
Richardson, Texas 75083-3938

Triquint Semiconductor
2300 N.E. Brookwood Pkwy.
Hillsboro, Oregon 97124

International Rectifier
a Hexfet America Facility
41915 Business Park Drive
Temecula, California 92590

International Rectifier
Cardiff Road
Newport
South Wales, England NP10 8YJ

Approved Storage Facility Locations

Williams Advanced Materials Inc.
2978 Main Street
Buffalo, New York 14214

Academy Corporation
6905 Washington Avenue NE
Albuquerque, New Mexico 87109

Academy Corporation
5531 Midway Park Place NE
Albuquerque, New Mexico 87109

Academy Corporation
5941 Midway Park Place NE
Albuquerque, New Mexico 87109

* * * * *

Annex III-2

BRUSH ENGINEERED MATERIALS INC. and SUBSIDIARIES
MANAGEMENT PERFORMANCE COMPENSATION PLAN
2010 PLAN YEAR

(as adopted February, 2010)

I. INTRODUCTION

The Management Performance Compensation Plan (“the Plan”) provides incentive compensation to eligible employees based principally on annual financial performance. Plan awards have a significant portion based on Company and/or Business Unit performance (“financial performance”), a component that recognizes individual and combined contributions toward personal/team objectives (“Personal/Team Performance”), and, for some participants, a “relative” company peer group financial measure.

II. DEFINITIONS

Plan Year:

The fiscal year for which the Company’s Business Unit performance, and any Plan awards are calculated.

Business Unit Performance:

The Executive Staff will designate the Business Units/Subsidiaries that are eligible for participation in the Plan for the Plan Year.

Each business unit has defined financial performance measures, which have in turn been approved by the Compensation Committee of the Board and/or the Executive Staff. These measures are expressed as a Minimum, Target and Maximum. Plan Awards include a “Financial Performance Component” based on the Business Unit performance.

Personal/Team Performance:

An assessment is made of an individual’s achievements and his/her contributions to work/project teams during the Plan Year. This assessment is expressed as a percentage of base compensation. The “Personal/Team Performance” component is distinct from the “Financial Performance” component.

Operating Profit (“OP”):

Profit or loss, before interest and taxes, and for domestic and international operations. Operating Profit will include any special write-off or accounting charge and accrued performance or incentive compensation.

Peer Group Return on Invested Capital (ROIC)

The publicly available return on invested capital change for those peer group companies included in the Company’s self-declared peer group in comparison to the Company. Due to the delays in reported information, the measurement period will include the fourth quarter of the prior year as well as the first three quarters of the current plan year. This “relative” company peer group financial measure is an independent measure and is not influenced by any other financial performance measure set by the Company for the plan year.

Working Capital:

This is a monthly calculation based on Business Unit/Subsidiary worldwide accounts receivable and FIFO inventory divided by annualized worldwide sales (current month plus prior two months annualized). The result being working capital as a percent of sales. At the end of the year the average of the twelve monthly, annualized sales numbers and twelve monthly working capital numbers (A/R and inventory) are calculated and a percent to sales is calculated based on the averages for the twelve periods. This twelve-month average is the basis for the incentive metric for working capital management.

Other Metrics:

From time to time, other metrics will be adopted that are aligned with a Business Unit's strategy and market challenges. These metrics will be defined and tracked by the corporate accounting department, subject to approval by the Executive Staff.

Base Compensation:

The participant's annual base salary in effect on September 30 of the Plan Year.

III. PARTICIPATION

At the beginning of the Plan Year, the Executive Staff will identify exempt, salaried employees whose responsibilities affect progress on critical issues facing the Company. Those individuals selected by the Executive Staff will be notified of their participation in the Plan, their performance compensation grade and performance compensation opportunity, and their applicable Business Unit designation.

Following the beginning of the Plan Year, the Executive Staff may admit new hires or individuals who are promoted or assigned additional and significant responsibilities. The Executive Staff may also alter performance compensation grade assignments to reflect changed responsibilities of participants during the Plan Year.

An employee who replaces or otherwise assumes the job functions or role of an employee, does not automatically assume the plan participation that had applied to the incumbent. Rather, participation by the new or replacing employee must be individually considered and approved.

Employees who are designated as participants before April 1 of the Plan year are eligible for full participation. Participants who are newly employed on or after April 1 and before July 1 are eligible for half of any award available for Personal/Team and Financial (Business Unit and/or Company) performance.

Participants who transfer from the Exempt Salaried Performance Compensation Plan to the Management Performance Compensation Plan on or after April 1 and before July 1 are eligible for full participation in the Personal/Team performance component and for half participation in the Financial (Business Unit and/or Company) performance component. Their eligibility under the Exempt Salaried Performance Compensation Plan ceases for the Plan Year.

Changes in performance compensation grade assignments will result in prorated participation in awards.

The eligibility of employees hired or with changed job responsibilities after June 30 will not be considered until a possible, subsequent Plan Year.

Normally, employees who are participants in any other annual incentive, commission or performance compensation plan are not eligible. The Executive Staff may consider prorated participation under special circumstances.

With two exceptions, participants must be employed on the last day of the Plan Year in order to be eligible for any performance compensation award. For a participant who becomes eligible for and who elects a severance option under the Chronic Beryllium Disease Policy as amended, any award under the Plan will be prorated to the beginning of the month after the employee exercises the severance option. The second exception pertains to retirement under a Company pension plan, in which case, any award will be prorated to the beginning of the month following the employee's retirement date. In no event will a prorated award be earned where the proration percent is 1/3 or less.

Eligible employees who have been on a leave of absence in excess of 13 weeks during the plan year will have their award reduced on a pro-rata basis to reflect their actual contribution.

IV. PERFORMANCE COMPENSATION OPPORTUNITY FOR FINANCIAL PERFORMANCE

The Compensation Committee of the Board of Directors will establish Minimum, Target and Maximum levels for each financial measurement.

The Executive Staff will assign participants to a specific Business Unit/Subsidiary for the performance compensation opportunity for Financial Performance.

Below is a summary of the performance compensation opportunity for the Plan Year.

Grade	Financial Component	Personal Team
D	20%	0-14%
E	10%	0-14%

Opportunity for participants in Grades A, B and C will be individualized as determined by the Compensation Committee or the Executive Staff.

The "Financial Performance" component of awards (Business Unit, Company, sub-unit, and/or other measurement), will begin once the Minimum level has been attained for Operating Profit. None of the other financial components will result in an award unless the Minimum level for Operating Profit has been met. Performance, which reaches or exceeds the Maximum value of the measure, will result in awards at 200 percent of Target opportunity. Award amounts for levels of achievement between Minimum and Target and between Target and Maximum will be prorated according to the level of achievement.

Financial awards will be prorated for transfers between units (Business Unit and/or Company) according to the length of service by months in each unit during the Plan Year.

V. PERFORMANCE COMPENSATION OPPORTUNITY for PERSONAL/TEAM PERFORMANCE

An Operating Profit “threshold” may be established, which must be achieved in order to make available a bonus opportunity to recognize the Personal/Team performance. If established, meeting this threshold would result in a Personal/Team opportunity payout. This threshold can be different than the Minimum Operating Profit level necessary to create a Financial Performance opportunity.

No awards for Personal/Team performance will be paid if a Threshold is established and is not met.

The “total pool” for Personal/Team performance of participants would typically average about 10 percent of the base compensation of participants, if the Operating Profit metric meets or exceeds Target. Performance below Target could result in the total pool being reduced to a lesser amount. The Business Unit Executive and the Executive Staff will decide allocation of the pool among eligible participants based on their performance throughout the plan year relative to achieving established goals and objectives.

VI. PAYMENT

Distribution of any performance compensation awards under the Plan to participants will be no later than March 15 of the year following the Plan Year.

VIII. GENERAL PROVISIONS

The Executive Staff has authority to make administrative decisions in the interests of the Plan.

The Board of Directors, through its Compensation Committee, shall have final and conclusive authority for interpretation, application, and possible modification of this Plan or established targets. The Board of Directors reserves the right to amend or terminate the Plan at any time. Subject to the preceding sentences, any determination by the Company’s independent accountants shall be final and conclusive as it relates to the calculation of financial results.

This Plan is not a contract of employment.

BRUSH ENGINEERED MATERIALS INC.

Agreement Relating to Restricted Shares

WHEREAS, _____, (the "Grantee") is an employee of Brush Engineered Materials Inc., an Ohio corporation (the "Corporation") or a Subsidiary; and

WHEREAS, the execution of an agreement in the form hereof (this "Agreement") has been authorized by a resolution of the Compensation Committee (the "Committee") of the Board of Directors of the Corporation that was duly adopted on February 2, 2010;

NOW, THEREFORE, pursuant to the Corporation's 2006 Stock Incentive Plan (the "Plan"), the Corporation hereby confirms to the Grantee the grant, effective on February 22, 2010 (the "Date of Grant"), of _____ Restricted Shares (as defined in the Plan), subject to the terms and conditions of the Plan and the following additional terms, conditions, limitations and restrictions:

ARTICLE I

DEFINITIONS

All terms used herein with initial capital letters that are defined in the Plan shall have the meanings assigned to them in the Plan when used herein with initial capital letters, shall have the following meaning:

ARTICLE II

CERTAIN TERMS OF RESTRICTED SHARES

1. Issuance of Restricted Shares. The Restricted Shares covered by this Agreement shall be issued to the Grantee on the Date of Grant. The Common Shares subject to this grant of Restricted Shares shall be fully paid and nonassessable.

2. Restrictions on Transfer of Shares. The Common Shares subject to this grant of Restricted Shares may not be sold, exchanged, assigned, transferred, pledged,

encumbered or otherwise disposed of by the Grantee, except to the Corporation, until the Restricted Shares have become nonforfeitable as provided in Section 3 of this Article II; provided, however, that the Grantee's rights with respect to such Common Shares may be transferred by will or pursuant to the laws of descent and distribution. Any purported transfer or encumbrance in violation of the provisions of this Section 2 of this Article II shall be void, and the other party to any such purported transaction shall not obtain any rights to or interest in such Common Shares. The Corporation in its sole discretion, when and as permitted by the Plan, may waive the restrictions on transferability with respect to all or a portion of the Common Shares subject to this grant of Restricted Shares.

3. Vesting of Restricted Shares.

(a) All of the Restricted Shares covered by this Agreement shall become nonforfeitable if the Grantee shall have remained in the continuous employ of the Corporation or a Subsidiary for three years from the Date of Grant.

(b) Notwithstanding the provisions of Section 3(a) of this Article II, all of the Restricted Shares covered by this Agreement shall immediately become nonforfeitable (i) if the Grantee dies or becomes permanently disabled while in the employ of the Corporation or a Subsidiary during the three-year period from the Date of Grant, or (ii) if a Change in Control (as defined below in Section 3(d) of this Article II) occurs during the three-year period from the Date of Grant while the Grantee is employed by the Corporation or a Subsidiary.

(c) Notwithstanding the provisions of Section 3(a) of this Article II, if the Grantee retires under a retirement plan of the Corporation or a Subsidiary at or after normal retirement age provided for in such retirement plan or retires at an earlier age with the consent of the Committee, a portion of the Restricted Shares covered by this Agreement shall become nonforfeitable. The number of Restricted Shares that shall become nonforfeitable shall be determined by multiplying the total number of Restricted

Shares granted hereunder by the number of months the Grantee remained in the continuous employ of the Corporation or a Subsidiary between the Date of Grant and the effective date of such retirement divided by 36. The Committee may, however, provide that more than such fraction shall become nonforfeitable in its discretion pursuant to Section 19(c) of the Plan.

(d) For purposes of this Agreement, "Change in Control" means:

(i) The acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "Person") of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of voting securities of the Corporation where such acquisition causes such Person to own (A) 20% or more of the combined voting power of the then outstanding voting securities of the Corporation entitled to vote generally in the election of directors (the "Outstanding Corporation Voting Securities") without the approval of the Incumbent Board as defined in (ii) below or (B) 35% or more of the Outstanding Voting Securities of the Corporation with the approval of the Incumbent Board; *provided, however*, that for purposes of this subsection (i), the following acquisitions shall not be deemed to result in a Change of Control: (I) any acquisition directly from the Corporation that is approved by the Incumbent Board (as defined in subsection (ii), below), (II) any acquisition by the Corporation or a subsidiary of the Corporation, (III) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Corporation or any corporation controlled by the Corporation, (IV) any acquisition by any Person pursuant to a transaction described in clauses (A), (B) and (C) of subsection (iii) below, or (V) any acquisition by, or other Business Combination (as defined in (iii) below) with, a person or group of which employees of the Corporation or any subsidiary of the

Corporation control a greater than 25% interest (a "MBO") but only if the Grantee is one of those employees of the Corporation or any subsidiary of the Corporation that are participating in the MBO; *provided, further*, that if any Person's beneficial ownership of the Outstanding Corporation Voting Securities reaches or exceeds 20% or 35%, as the case may be, as a result of a transaction described in clause (I) or (II) above, and such Person subsequently acquires beneficial ownership of additional voting securities of the Corporation, such subsequent acquisition shall be treated as an acquisition that causes such Person to own 20% or 35% or more, as the case may be, of the Outstanding Corporation Voting Securities; and *provided, further*, that if at least a majority of the members of the Incumbent Board determines in good faith that a Person has acquired beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 20% or more of the Outstanding Corporation Voting Securities inadvertently, and such Person divests as promptly as practicable a sufficient number of shares so that such Person beneficially owns (within the meanings of Rule 13d-3 promulgated under the Exchange Act) less than 20% of the Outstanding Corporation Voting Securities, then no Change of Control shall have occurred as a result of such Person's acquisition; or

(ii) individuals who, as of the date hereof, constitute the Board (the "Incumbent Board" (as modified by this clause (ii)) cease for any reason to constitute at least a majority of the Board; *provided, however*, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by the Corporation's shareholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board (either by a specific vote or by approval of the proxy statement of the Corporation in which such person is named as a nominee for director, without objection to such

nomination) shall be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board; or

(iii) the consummation of a reorganization, merger or consolidation or sale or other disposition of all or substantially all of the assets of the Corporation or the acquisition of assets of another corporation, or other transaction ("Business Combination") excluding, however, such a Business Combination pursuant to which (A) the individuals and entities who were the ultimate beneficial owners of voting securities of the Corporation immediately prior to such Business Combination beneficially own, directly or indirectly, more than 65% of, respectively, the then outstanding shares of common stock and the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the entity resulting from such Business Combination (including, without limitation, an entity that as a result of such transaction owns the Corporation or all or substantially all of the Corporation's assets either directly or through one or more subsidiaries), (B) no Person (excluding any employee benefit plan (or related trust) of the Corporation, the Corporation or such entity resulting from such Business Combination) beneficially owns, directly or indirectly (I) 20% or more, if such Business Combination is approved by the Incumbent Board or (II) 35% or more, if such Business Combination is not approved by the Incumbent Board, of the combined voting power of the then outstanding securities entitled to vote generally in the election of directors of the entity resulting from such Business Combination and

(C) at least a majority of the members of the board of directors of the corporation resulting from such Business Combination were members of the Incumbent Board at the time of the execution of the initial agreement, or of the action of the Board, providing for such Business Combination; or

(iv) approval by the shareholders of the Corporation of a complete liquidation or dissolution of the Corporation except pursuant to a Business Combination described in clauses (A), (B) and (C) of subsection (iii), above.

4. Book Entry; Stock Certificates . The Common Shares subject to this grant of Restricted Shares shall be uncertificated and evidenced by book entry only until the Restricted Shares become nonforfeitable pursuant to Section 3(a) of this Article II. At such time, a Certificate or Certificates representing such shares (less any shares withheld for taxes pursuant to Section 2 of Article III hereof) shall be delivered to the Grantee.

5. Forfeiture of Shares . The Restricted Shares shall be forfeited, except as otherwise provided in Section 3(b) or 3(c) above, if the Grantee ceases to be employed by the Corporation or a Subsidiary prior to three years from the Date of Grant.

6. Dividend, Voting and Other Rights .

(a) Except as otherwise provided herein, from and after the Date of Grant, the Grantee shall have all of the rights of a shareholder with respect to the Restricted Shares covered by this Agreement, including the right to vote such Restricted Shares and receive any dividends that may be paid thereon; provided, however, that any additional Common Shares or other securities that the Grantee may become entitled to receive pursuant to a stock dividend, stock split, combination of shares, recapitalization, merger, consolidation, separation or reorganization or any other change in the capital structure of the Corporation shall be subject to the same restrictions as the Restricted Shares covered by this Agreement.

(b) Cash dividends on the Restricted Shares covered by this Agreement shall be sequestered by the Corporation from and after the Date of Grant until such time as any of such Restricted Shares become nonforfeitable in accordance with Section 3 of this Article II, whereupon such dividends shall be paid to the Grantee in cash to the extent such dividends are attributable to Restricted Shares that have become nonforfeitable. To the extent that Restricted Shares covered by this Agreement are forfeited pursuant to Section 4 of this Article II, all the dividends sequestered with respect to such Restricted Shares shall also be forfeited. No interest shall be payable with respect to any such dividends.

7. Effect of Detrimental Activity. Notwithstanding anything herein to the contrary, if the Grantee, either during employment by the Corporation or a subsidiary or within one year after termination of such employment, shall engage in any Detrimental Activity, (as hereinafter defined) and the Board shall so find, the Grantee shall:

(a) Return to the Corporation all Restricted Shares that the Grantee has not disposed of that became nonforfeitable pursuant to this Agreement, and

(b) With respect to any Restricted Shares that the Grantee has disposed of that became nonforfeitable pursuant to this Agreement, pay to the Corporation in cash the value of such Restricted Shares on the date such Restricted Shares became nonforfeitable. To the extent that such amounts are not paid to the Corporation, the Corporation may, to the extent permitted by law, set off the amounts so payable to it against any amounts that may be owing from time to time by the Corporation or a subsidiary to the Grantee, whether as wages, deferred compensation or vacation pay or in the form of any other benefit or for any other reason.

8. For purposes of this Agreement, the term "Detrimental Activity" shall include:

(a) (i) Engaging in any activity in violation of the Section entitled "Competitive Activity; Confidentiality; Nonsolicitation" in the Severance Agreement between the Corporation and the Grantee, if such agreement is in effect at the date hereof, or in violation of any corresponding provision in any other agreement between the Corporation and the Grantee in effect on the date hereof providing for the payment of severance compensation; or

(ii) If no such severance agreement is in effect as of the date hereof or if a severance agreement does not contain a Section corresponding to "Competitive Activity; Confidentiality; Nonsolicitation":

(A) Competitive Activity During Employment. Competing with the Corporation anywhere within the United States during the term of the Grantee's employment, including, without limitation:

(I) entering into or engaging in any business which competes with the business of the Corporation;

(II) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business that competes with, the business of the Corporation;

(III) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation or attempting to do so; or

(IV) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the business of the Corporation.

(B) Following Termination. For a period of one year following the Grantee's termination date:

(I) entering into or engaging in any business which competes with the Corporation's business within the Restricted Territory (as hereinafter defined);

(II) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business, wherever located, that competes with, the Corporation's business within the Restricted Territory;

(III) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation within the Restricted Territory, or attempting to do so; or

(IV) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the Corporation's business within the Restricted Territory.

For the purposes of Sections 8(a)(ii)(A) and (B) above, inclusive, but without limitation thereof, the Grantee will be in violation thereof if the Grantee engages in any or all of the activities set forth therein directly as an individual on the Grantee's own account, or indirectly as a partner, joint venturer, employee, agent, salesperson, consultant, officer and/or director of any firm, association, partnership, corporation or other entity, or as a stockholder of any corporation in which the Grantee or the Grantee's spouse, child or parent owns, directly or indirectly, individually or in the aggregate, more than five percent (5%) of the outstanding stock.

(C) "The Corporation." For the purposes of this Section 8(a)(ii) of Article II, the "Corporation" shall include any and all direct and indirect subsidiaries, parents, and affiliated, or related companies of the Corporation for which the Grantee worked or had responsibility at the time of termination of the Grantee's employment and at any time during the two year period prior to such termination.

(D) "The Corporation's Business." For the purposes of this Section 8 of Article II inclusive, the Corporation's business is defined to be the manufacture, marketing and sale of high performance engineered materials serving global telecommunications and computer, magnetic and optical data storage, aerospace and defense, automotive electronics, industrial components and appliance markets, as further described in any and all manufacturing, marketing and sales manuals and materials of the Corporation as the same may be altered, amended, supplemented or otherwise changed from time to time, or of any other products or services substantially similar to or readily substitutable for any such described products and services.

(E) "Restricted Territory." For the purposes of Section 8(a)(ii)(B) of Article II, the Restricted Territory shall be defined as and limited to:

(I) the geographic area(s) within a one hundred mile radius of any and all of the Corporation's location(s) in, to, or for which the Grantee worked, to which the Grantee was assigned or had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination; and

(II) all of the specific customer accounts, whether within or outside of the geographic area described in (I) above, with which the

Grantee had any contact or for which the Grantee had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination.

(F) Extension. If it shall be judicially determined that the Grantee has violated any of the Grantee's obligations under Section 8(a)(ii)(B) of Article II, then the period applicable to each obligation that the Grantee shall have been determined to have violated shall automatically be extended by a period of time equal in length to the period during which such violation(s) occurred.

(b) Non-Solicitation. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include directly or indirectly at any time soliciting or inducing or attempting to solicit or induce any employee(s), sales representative(s), agent(s) or consultant(s) of the Corporation and/or of its parents, or its other subsidiaries or affiliated or related companies to terminate their employment, representation or other association with the Corporation and/or its parent or its other subsidiary or affiliated or related companies.

(c) Further Covenants. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include:

(i) directly or indirectly, at any time during or after the Grantee's employment with the Corporation, disclosing, furnishing, disseminating, making available or, except in the course of performing the Grantee's duties of employment, using any trade secrets or confidential business and technical information of the Corporation or its customers or vendors, including without limitation as to when or how the Grantee may have acquired such information. Such confidential information shall include, without limitation, the Corporation's unique selling, manufacturing and servicing methods and business techniques,

training, service and business manuals, promotional materials, training courses and other training and instructional materials, vendor and product information, customer and prospective customer lists, other customer and prospective customer information and other business information. The Grantee specifically acknowledges that all such confidential information, whether reduced to writing, maintained on any form of electronic media, or maintained in the Grantee's mind or memory and whether compiled by the Corporation, and/or the Grantee, derives independent economic value from not being readily known to or ascertainable by proper means by others who can obtain economic value from its disclosure or use, that reasonable efforts have been made by the Corporation to maintain the secrecy of such information, that such information is the sole property of the Corporation and that any retention and use of such information by the Grantee during the Grantee's employment with the Corporation (except in the course of performing the Grantee's duties and obligations to the Corporation) or after the termination of the Grantee's employment shall constitute a misappropriation of the Corporation's trade secrets.

(ii) Upon termination of the Grantee's employment with the Corporation, for any reason, the Grantee's failure to return to the Corporation, in good condition, all property of the Corporation, including without limitation, the originals and all copies of any materials which contain, reflect, summarize, describe, analyze or refer or relate to any items of information listed in Section 8(c)(i) of Article II of this Agreement.

(d) Discoveries and Inventions. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include the failure or refusal of the Grantee to assign to the Corporation, its successors, assigns or nominees, all of the Grantee's rights to any discoveries, inventions and improvements, whether patentable or

not, made, conceived or suggested, either solely or jointly with others, by the Grantee while in the Corporation's employ, whether in the course of the Grantee's employment with the use of the Corporation's time, material or facilities or that is in any way within or related to the existing or contemplated scope of the Corporation's business. Any discovery, invention or improvement relating to any subject matter with which the Corporation was concerned during the Grantee's employment and made, conceived or suggested by the Grantee, either solely or jointly with others, within one year following termination of the Grantee's employment under this Agreement or any successor agreements shall be irrebuttably presumed to have been so made, conceived or suggested in the course of such employment with the use of the Corporation's time, materials or facilities. Upon request by the Corporation with respect to any such discoveries, inventions or improvements, the Grantee will execute and deliver to the Corporation, at any time during or after the Grantee's employment, all appropriate documents for use in applying for, obtaining and maintaining such domestic and foreign patents as the Corporation may desire, and all proper assignments therefor, when so requested, at the expense of the Corporation, but without further or additional consideration.

(e) Work Made For Hire. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include violation of the Corporation's rights in any or all work papers, reports, documentation, drawings, photographs, negatives, tapes and masters therefore, prototypes and other materials (hereinafter, "items"), including without limitation, any and all such items generated and maintained on any form of electronic media, generated by Grantee during the Grantee's employment with the Corporation. The Grantee acknowledges that, to the extent permitted by law, all such items shall be considered a "work made for hire" and that ownership of any and all copyrights in any and all such items shall belong to the Corporation. The item will recognize the

Corporation as the copyright owner, will contain all proper copyright notices, e.g., "(creation date) [Corporation's Name], All Rights Reserved," and will be in condition to be registered or otherwise placed in compliance with registration or other statutory requirements throughout the world.

(f) Termination for Cause. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include activity that results in termination for Cause. For the purposes of this Section, "Cause" shall mean that, the Grantee shall have:

(i) been convicted of a criminal violation involving fraud, embezzlement, theft or violation of federal antitrust statutes or federal securities laws in connection with his duties or in the course of his employment with the Corporation or any affiliate of the Corporation;

(ii) committed intentional wrongful damage to property of the Corporation or any affiliate of the Corporation; or

(iii) committed intentional wrongful disclosure of secret processes or confidential information of the Corporation or any affiliate of the Corporation; and any such act shall have been demonstrably and materially harmful to the Corporation.

(g) Other Injurious Conduct. Detrimental Activity shall also include any other conduct or act determined to be injurious, detrimental or prejudicial to any significant interest of the Corporation or any subsidiary unless the Grantee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation.

(h) Reasonableness. The Grantee acknowledges that the Grantee's obligations under this Section 8 of Article II are reasonable in the context of the nature of the Corporation's business and the competitive injuries likely to be sustained by the

Corporation if the Grantee were to violate such obligations. The Grantee further acknowledges that this Agreement is made in consideration of, and is adequately supported by the agreement of the Corporation to perform its obligations under this Agreement and by other consideration, which the Grantee acknowledges constitutes good, valuable and sufficient consideration.

ARTICLE III

GENERAL PROVISIONS

1. Compliance with Law . The Corporation shall make reasonable efforts to comply with all applicable federal and state securities laws; provided, however, notwithstanding any other provision of this Agreement, the Corporation shall not be obligated to issue any Common Shares pursuant to this Agreement if the issuance thereof would result in a violation of any such law.

2. Withholding Taxes . If the Corporation or any Subsidiary shall be required to withhold any federal, state, local or foreign tax in connection with any issuance or vesting of Common Shares or other securities pursuant to this Agreement, the Grantee shall pay the tax or make provisions that are satisfactory to the Corporation or such Subsidiary for the payment thereof. The Grantee may elect to satisfy all or any part of any such withholding obligation by surrendering to the Corporation or such Subsidiary a portion of the Common Shares that are issued or transferred to the Grantee or that become nontransferable by the Grantee hereunder, and the Common Shares so surrendered by the Grantee shall be credited against any such withholding obligation at the Market Value per Share of such Common Shares on the date of such surrender.

3. Continuous Employment . For purposes of this Agreement, the continuous employment of the Grantee with the Corporation or a Subsidiary shall not be deemed to have been interrupted, and the Grantee shall not be deemed to have ceased to be

an employee of the Corporation or a Subsidiary, by reason of the transfer of his employment among the Corporation and its Subsidiaries or a leave of absence approved by the Board.

4. No Employment Contract; Right to Terminate Employment. The grant of the Restricted Shares to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant of the Restricted Shares and any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by law. Nothing in this Agreement will give the Grantee any right to continue employment with the Corporation or any Subsidiary, as the case may be, or interfere in any way with the right of the Corporation or a Subsidiary to terminate the employment of the Grantee at any time.

5. Relation to Other Benefits. Any economic or other benefit to the Grantee under this Agreement or the Plan shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Corporation or a Subsidiary and shall not affect the amount of any life insurance coverage available to any beneficiary under any life insurance plan covering employees of the Corporation or a Subsidiary.

6. Information. Information about the Grantee and the Grantee's participation in the Plan may be collected, recorded and held, used and disclosed for any purpose related to the administration of the Plan. The Grantee understands that such processing of this information may need to be carried out by the Corporation and its Subsidiaries and by third party administrators whether such persons are located within the Grantee's country or elsewhere, including the United States of America. The Grantee consents to the processing of information relating to the Grantee and the Grantee's participation in the Plan in any one or more of the ways referred to above.

7. Amendments. Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee with under this Agreement without the Grantee's consent.

8. Severability. In the event that one or more of the provisions of this Agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

9. Governing Law. This agreement is made under, and shall be construed in accordance with, the internal substantive laws of the State of Ohio.

The undersigned Grantee hereby accepts the award granted pursuant to this Agreement on the terms and conditions set forth herein.

Dated: _____

Grantee

Executed in the name of and on behalf of the Corporation at Cleveland, Ohio as of this 15th day of March, 2010.

BRUSH ENGINEERED MATERIALS INC.

By _____

BRUSH ENGINEERED MATERIALS INC.

Restricted Stock Units Agreement

WHEREAS, _____, (the "Grantee") is an employee of Brush Engineered Materials Inc., an Ohio corporation (the "Corporation") or a Subsidiary; and

WHEREAS, the execution of an agreement in the form hereof (this "Agreement") has been authorized by a resolution of the Compensation Committee (the "Committee") of the Board of Directors of the Corporation that was duly adopted on February ____, 2010;

NOW, THEREFORE, pursuant to the Corporation's 2006 Stock Incentive Plan (the "Plan"), the Corporation hereby confirms to the Grantee the grant, effective on February ____, 2010 (the "Date of Grant"), of _____ Restricted Stock Units (as defined in the Plan) ("RSUs"), subject to the terms and conditions of the Plan and the following additional terms, conditions, limitations and restrictions:

ARTICLE I

DEFINITIONS

All terms used herein with initial capital letters that are defined in the Plan shall have the meanings assigned to them in the Plan when used herein with initial capital letters.

ARTICLE II

CERTAIN TERMS OF RESTRICTED STOCK UNITS

1. Payment of RSUs. The RSUs covered by this Agreement shall become payable to the Grantee if they become nonforfeitable in accordance with Section 3 of this Article II.

2. RSUs Not Transferable. The RSUs covered by the Agreement shall not be transferable other than by will or pursuant to the laws of descent and distribution prior to payment.

3. Vesting of RSUs.

(a) Subject to the provisions of Sections 3(b) and 3(c) of this Article II, all of the RSUs covered by this Agreement shall become nonforfeitable if the Grantee shall have remained in the continuous employ of the Corporation or a Subsidiary for three years from the Date of Grant.

(b) Notwithstanding the provisions of Section 3(a) of this Article II, all of the RSUs covered by this Agreement shall immediately become nonforfeitable (i) if the Grantee dies or becomes permanently disabled (as hereinafter defined) while in the employ of the Corporation or a Subsidiary during the three-year period from the Date of Grant, or (ii) if a Change in Control (as defined below in Section 3(d) of this Article II) occurs during the three-year period from the Date of Grant while the Grantee is employed by the Corporation or a Subsidiary. The Grantee shall be considered to have become permanently disabled if the Grantee has suffered a permanent disability within the meaning of the long-term disability plan in effect for, or applicable to, the Grantee and is "disabled" within the meaning of Section 409A(a)(2)(C) of the Code. However, if the Change in Control does not constitute a "change in control" for purposes of Section 409A(a)(2)(A)(v) of the Code, then payment for the RSUs will be made upon the earliest of (1) the Grantee's "separation from service" with the Corporation and its Subsidiaries within the meaning of Section 409A(a)(2)(A)(i) of the Code (or, if the Grantee is a "specified employee" as determined pursuant to identification methodology adopted by the Corporation in compliance with Section 409A of the Code, the date of payment shall be the first business day of the seventh month after the date of the Grantee's separation from service with the Corporation and its Subsidiaries within the meaning of Section 409A(a)(2)(A)(i) of the Code), (2) the applicable vesting date under Section 3(a) of this

Article II, (3) the Grantee's death, or (4) the Grantee's permanent disability (as defined herein).

(c) Notwithstanding the provisions of Section 3(a) of this Article II, if the Grantee should Retire (as hereinafter defined), a portion of the RSUs covered by this Agreement shall become nonforfeitable. The number of RSUs that shall become nonforfeitable shall be determined by multiplying the total number of RSUs granted hereunder by the number of months the Grantee remained in the continuous employ of the Corporation or a Subsidiary between the Date of Grant and the effective date of such retirement divided by 36. The Committee may, however, provide that more than such fraction shall become nonforfeitable in its discretion pursuant to Section 19(c) of the Plan. "Retire" shall mean the Grantee's retirement under a retirement plan of the Corporation or a Subsidiary at or after normal retirement age provided for in such retirement plan or retirement at an earlier age with the consent of the Committee, or if any such retirement does not constitute a separation from service with the Corporation and its Subsidiaries within the meaning of Section 409A(a)(2)(A)(i) of the Code, the Grantee's later separation from service. Notwithstanding the foregoing, if the Grantee is a "specified employee" as determined pursuant to identification methodology adopted by the Corporation in compliance with Section 409A of the Code, the date of payment for the RSUs shall be the first business day of the seventh month after the date of the Grantee's separation from service with the Corporation and its Subsidiaries within the meaning of Section 409A(a)(2)(A)(i) of the Code.

(d) For purposes of this Agreement, "Change in Control" means:

(i) The acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "Person") of beneficial ownership (within

the meaning of Rule 13d-3 promulgated under the Exchange Act) of voting securities of the Corporation where such acquisition causes such Person to own (A) 20% or more of the combined voting power of the then outstanding voting securities of the Corporation entitled to vote generally in the election of directors (the "Outstanding Corporation Voting Securities") without the approval of the Incumbent Board as defined in (ii) below or (B) 35% or more of the Outstanding Voting Securities of the Corporation with the approval of the Incumbent Board; *provided, however*, that for purposes of this subsection (i), the following acquisitions shall not be deemed to result in a Change of Control: (I) any acquisition directly from the Corporation that is approved by the Incumbent Board (as defined in subsection (ii), below), (II) any acquisition by the Corporation or a subsidiary of the Corporation, (III) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Corporation or any corporation controlled by the Corporation, (IV) any acquisition by any Person pursuant to a transaction described in clauses (A), (B) and (C) of subsection (iii) below, or (V) any acquisition by, or other Business Combination (as defined in (iii) below) with, a person or group of which employees of the Corporation or any subsidiary of the Corporation control a greater than 25% interest (a "MBO") but only if the Grantee is one of those employees of the Corporation or any subsidiary of the Corporation that are participating in the MBO; *provided, further*, that if any Person's beneficial ownership of the Outstanding Corporation Voting Securities reaches or exceeds 20% or 35%, as the case may be, as a result of a transaction described in clause (I) or (II) above, and such Person subsequently acquires beneficial ownership of additional voting securities of the Corporation, such subsequent acquisition shall be treated as an acquisition that causes such

Person to own 20% or 35% or more, as the case may be, of the Outstanding Corporation Voting Securities; and *provided, further*, that if at least a majority of the members of the Incumbent Board determines in good faith that a Person has acquired beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 20% or more of the Outstanding Corporation Voting Securities inadvertently, and such Person divests as promptly as practicable a sufficient number of shares so that such Person beneficially owns (within the meanings of Rule 13d-3 promulgated under the Exchange Act) less than 20% of the Outstanding Corporation Voting Securities, then no Change of Control shall have occurred as a result of such Person's acquisition; or

(ii) individuals who, as of the date hereof, constitute the Board (the "Incumbent Board" (as modified by this clause (ii)) cease for any reason to constitute at least a majority of the Board; *provided, however*, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by the Corporation's shareholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board (either by a specific vote or by approval of the proxy statement of the Corporation in which such person is named as a nominee for director, without objection to such nomination) shall be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board; or

(iii) the consummation of a reorganization, merger or consolidation or sale or other disposition of all or substantially all of the assets of the Corporation or the acquisition of assets of another corporation, or other transaction ("Business Combination") excluding, however, such a Business Combination pursuant to which (A) the individuals and entities who were the ultimate beneficial owners of voting securities of the Corporation immediately prior to such Business Combination beneficially own, directly or indirectly, more than 65% of, respectively, the then outstanding shares of common stock and the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the entity resulting from such Business Combination (including, without limitation, an entity that as a result of such transaction owns the Corporation or all or substantially all of the Corporation's assets either directly or through one or more subsidiaries), (B) no Person (excluding any employee benefit plan (or related trust) of the Corporation, the Corporation or such entity resulting from such Business Combination) beneficially owns, directly or indirectly (I) 20% or more, if such Business Combination is approved by the Incumbent Board or (II) 35% or more, if such Business Combination is not approved by the Incumbent Board, of the combined voting power of the then outstanding securities entitled to vote generally in the election of directors of the entity resulting from such Business Combination and (C) at least a majority of the members of the board of directors of the corporation resulting from such Business Combination were members of the Incumbent Board at the time of the execution of the initial agreement, or of the action of the Board, providing for such Business Combination; or

(iv) approval by the shareholders of the Corporation of a complete liquidation or dissolution of the Corporation except pursuant to a Business Combination described in clauses (A), (B) and (C) of subsection (iii), above.

4. Form and Time of Payment of RSUs. Except as otherwise provided for in Section 2 of Article III, payment for the RSUs shall be made in form of the cash at the time they become nonforfeitable or otherwise become payable in accordance with Section 3 of this Article II. The cash payment shall be equal to (a) Market Value per Share on the date the RSUs become nonforfeitable times (b) the number of RSUs covered by this Agreement plus any dividend equivalents accrued on the RSUs since the Date of Grant (as provided in Section 6 of this Article II below). Payments will be made in U.S. Dollars, less any applicable federal, state, local or foreign withholding taxes. For the avoidance of doubt, in no event shall the Grantee be entitled to receive payment in any form other than cash, and under no circumstances shall the Grantee be entitled to receive Common Shares or any other security hereunder.

5. Forfeiture of RSUs. The RSUs shall be forfeited, except as otherwise provided in Section 3(b) or 3(c) of this Article II above, if the Grantee ceases to be employed by the Corporation or a Subsidiary prior to three years from the Date of Grant.

6. Dividend Equivalents. From and after the Date of Grant and until the earlier of (a) the time when the RSUs become nonforfeitable and payable in accordance with Section 3 of this Article II or (b) the time when the Grantee's right to receive cash payment of RSUs is forfeited in accordance with Section 4 of this Article II, on the date that the Corporation pays a cash dividend (if any) to holders of Common Shares generally, the Grantee shall be entitled to a number of additional whole RSUs determined by dividing (i) the product of (A) the dollar amount of the cash dividend paid per Common Share on such date and (B) the total number of RSUs (including dividend equivalents paid thereon) previously credited to the Grantee as of such date, by (ii) the Market Value per Share on such date. Such dividend

equivalents (if any) shall be subject to the same terms and conditions and shall be paid or forfeited in the same manner and at the same time as the RSUs to which the dividend equivalents were credited.

7. Effect of Detrimental Activity. Notwithstanding anything herein to the contrary, if the Grantee, either during employment by the Corporation or a Subsidiary or within one year after termination of such employment, shall engage in any Detrimental Activity, (as hereinafter defined) and the Board shall so find, the Grantee shall:

(a) Forfeit all RSUs held by the Grantee, and

(b) With respect to any RSUs that have become nonforfeitable and been paid pursuant to this Agreement, pay to the Corporation in cash an amount equal to the payment Grantee received when the RSUs become nonforfeitable. To the extent that such amount is not paid to the Corporation, the Corporation may, to the extent permitted by law, set off the amount so payable to it against any amounts that may be owing from time to time by the Corporation or a Subsidiary to the Grantee, whether as wages, deferred compensation or vacation pay or in the form of any other benefit or for any other reason.

8. For purposes of this Agreement, the term "Detrimental Activity" shall include:

(a) (i) Engaging in any activity in violation of the Section entitled "Competitive Activity; Confidentiality; Nonsolicitation" in the Severance Agreement between the Corporation and the Grantee, if such agreement is in effect at the date hereof, or in violation of any corresponding provision in any other agreement between the Corporation and the Grantee in effect on the date hereof providing for the payment of severance compensation; or

(ii) If no such severance agreement is in effect as of the date hereof or if a severance agreement does not contain a Section corresponding to "Competitive Activity; Confidentiality; Nonsolicitation":

(A) Competitive Activity During Employment. Competing with the Corporation anywhere within the United States during the term of the Grantee's employment, including, without limitation:

(I) entering into or engaging in any business which competes with the business of the Corporation;

(II) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business that competes with, the business of the Corporation;

(III) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation or attempting to do so; or

(IV) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the business of the Corporation.

(B) Following Termination. For a period of one year following the Grantee's termination date:

(I) entering into or engaging in any business which competes with the Corporation's business within the Restricted Territory (as hereinafter defined);

(II) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business,

wherever located, that competes with, the Corporation's business within the Restricted Territory;

(III) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation within the Restricted Territory, or attempting to do so; or

(IV) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the Corporation's business within the Restricted Territory.

For the purposes of Sections 8(a)(ii)(A) and (B) above, inclusive, but without limitation thereof, the Grantee will be in violation thereof if the Grantee engages in any or all of the activities set forth therein directly as an individual on the Grantee's own account, or indirectly as a partner, joint venturer, employee, agent, salesperson, consultant, officer and/or director of any firm, association, partnership, corporation or other entity, or as a stockholder of any corporation in which the Grantee or the Grantee's spouse, child or parent owns, directly or indirectly, individually or in the aggregate, more than five percent (5%) of the outstanding stock.

(C) "The Corporation." For the purposes of this Section 8(a)(ii) of Article II, the "Corporation" shall include any and all direct and indirect subsidiaries, parents, and affiliated, or related companies of the Corporation for which the Grantee worked or had responsibility at the time of termination of the Grantee's employment and at any time during the two year period prior to such termination.

(D) "The Corporation's Business." For the purposes of this Section 8 of Article II inclusive, the Corporation's business is defined to be the manufacture, marketing and sale of high performance engineered materials serving global telecommunications and computer, magnetic and optical data storage, aerospace and defense, automotive electronics, industrial components and appliance markets, as further described in any and all manufacturing, marketing and sales manuals and materials of the Corporation as the same may be altered, amended, supplemented or otherwise changed from time to time, or of any other products or services substantially similar to or readily substitutable for any such described products and services.

(E) "Restricted Territory." For the purposes of Section 8(a)(ii)(B) of Article II, the Restricted Territory shall be defined as and limited to:

(I) the geographic area(s) within a one hundred mile radius of any and all of the Corporation's location(s) in, to, or for which the Grantee worked, to which the Grantee was assigned or had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination; and

(II) all of the specific customer accounts, whether within or outside of the geographic area described in (I) above, with which the Grantee had any contact or for which the Grantee had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination.

(F) Extension. If it shall be judicially determined that the Grantee has violated any of the Grantee's obligations under Section 8(a)(ii)(B) of Article II, then the period applicable to each obligation that the Grantee shall have been determined to have violated shall automatically be extended by a period of time equal in length to the period during which such violation(s) occurred.

(b) Non-Solicitation. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include directly or indirectly at any time soliciting or inducing or attempting to solicit or induce any employee(s), sales representative(s), agent(s) or consultant(s) of the Corporation and/or of its parents, or its other subsidiaries or affiliated or related companies to terminate their employment, representation or other association with the Corporation and/or its parent or its other subsidiary or affiliated or related companies.

(c) Further Covenants. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include:

(i) directly or indirectly, at any time during or after the Grantee's employment with the Corporation, disclosing, furnishing, disseminating, making available or, except in the course of performing the Grantee's duties of employment, using any trade secrets or confidential business and technical information of the Corporation or its customers or vendors, including without limitation as to when or how the Grantee may have acquired such information. Such confidential information shall include, without limitation, the Corporation's unique selling, manufacturing and servicing methods and business techniques, training, service and business manuals, promotional materials, training courses and other training and instructional materials, vendor and product information, customer and prospective customer lists, other customer and prospective

customer information and other business information. The Grantee specifically acknowledges that all such confidential information, whether reduced to writing, maintained on any form of electronic media, or maintained in the Grantee's mind or memory and whether compiled by the Corporation, and/or the Grantee, derives independent economic value from not being readily known to or ascertainable by proper means by others who can obtain economic value from its disclosure or use, that reasonable efforts have been made by the Corporation to maintain the secrecy of such information, that such information is the sole property of the Corporation and that any retention and use of such information by the Grantee during the Grantee's employment with the Corporation (except in the course of performing the Grantee's duties and obligations to the Corporation) or after the termination of the Grantee's employment shall constitute a misappropriation of the Corporation's trade secrets.

(ii) Upon termination of the Grantee's employment with the Corporation, for any reason, the Grantee's failure to return to the Corporation, in good condition, all property of the Corporation, including without limitation, the originals and all copies of any materials which contain, reflect, summarize, describe, analyze or refer or relate to any items of information listed in Section 8(c)(i) of Article II of this Agreement.

(d) Discoveries and Inventions. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include the failure or refusal of the Grantee to assign to the Corporation, its successors, assigns or nominees, all of the Grantee's rights to any discoveries, inventions and improvements, whether patentable or not, made, conceived or suggested, either solely or jointly with others, by the Grantee while in the Corporation's employ, whether in the course of the Grantee's employment

with the use of the Corporation's time, material or facilities or that is in any way within or related to the existing or contemplated scope of the Corporation's business. Any discovery, invention or improvement relating to any subject matter with which the Corporation was concerned during the Grantee's employment and made, conceived or suggested by the Grantee, either solely or jointly with others, within one year following termination of the Grantee's employment under this Agreement or any successor agreements shall be irrebuttably presumed to have been so made, conceived or suggested in the course of such employment with the use of the Corporation's time, materials or facilities. Upon request by the Corporation with respect to any such discoveries, inventions or improvements, the Grantee will execute and deliver to the Corporation, at any time during or after the Grantee's employment, all appropriate documents for use in applying for, obtaining and maintaining such domestic and foreign patents as the Corporation may desire, and all proper assignments therefor, when so requested, at the expense of the Corporation, but without further or additional consideration.

(e) Work Made For Hire. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include violation of the Corporation's rights in any or all work papers, reports, documentation, drawings, photographs, negatives, tapes and masters therefore, prototypes and other materials (hereinafter, "items"), including without limitation, any and all such items generated and maintained on any form of electronic media, generated by Grantee during the Grantee's employment with the Corporation. The Grantee acknowledges that, to the extent permitted by law, all such items shall be considered a "work made for hire" and that ownership of any and all copyrights in any and all such items shall belong to the Corporation. The item will recognize the Corporation as the copyright owner, will contain all proper copyright notices, e.g.,

“(creation date) [Corporation’s Name], All Rights Reserved,” and will be in condition to be registered or otherwise placed in compliance with registration or other statutory requirements throughout the world.

(f) Termination for Cause. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include activity that results in termination for Cause. For the purposes of this Section, “Cause” shall mean that, the Grantee shall have:

(i) been convicted of a criminal violation involving fraud, embezzlement, theft or violation of federal antitrust statutes or federal securities laws in connection with his duties or in the course of his employment with the Corporation or any affiliate of the Corporation;

(ii) committed intentional wrongful damage to property of the Corporation or any affiliate of the Corporation; or

(iii) committed intentional wrongful disclosure of secret processes or confidential information of the Corporation or any affiliate of the Corporation; and any such act shall have been demonstrably and materially harmful to the Corporation.

(g) Other Injurious Conduct. Detrimental Activity shall also include any other conduct or act determined to be injurious, detrimental or prejudicial to any significant interest of the Corporation or any subsidiary unless the Grantee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation.

(h) Reasonableness. The Grantee acknowledges that the Grantee’s obligations under this Section 8 of Article II are reasonable in the context of the nature of the Corporation’s business and the competitive injuries likely to be sustained by the

Corporation if the Grantee were to violate such obligations. The Grantee further acknowledges that this Agreement is made in consideration of, and is adequately supported by the agreement of the Corporation to perform its obligations under this Agreement and by other consideration, which the Grantee acknowledges constitutes good, valuable and sufficient consideration.

ARTICLE III

GENERAL PROVISIONS

1. Compliance with Law . The Corporation shall make reasonable efforts to comply with all applicable federal and state securities laws.

2. Dilution and Other Adjustments . The Committee shall make such adjustments in the RSUs covered by this Agreement as such Committee in its sole discretion, exercised in good faith, may determine is equitably required to prevent dilution or enlargement of the rights of the Grantee that otherwise would result from (a) any stock dividend, stock split, combination of shares, recapitalization or other change in the capital structure of the Corporation, or (b) any merger, consolidation, spin-off, reorganization, partial or complete liquidation or other distribution of assets, or issuance of warrants or other rights to purchase securities, or (c) any other corporate transaction or event having an effect similar to any of the foregoing. In the event of any such transaction or event, the Committee may provide in substitution for this award of RSUs such alternative consideration as it may in good faith determine to be equitable under the circumstances and may require in connection therewith the surrender of this award of RSUs so replaced.

3. Continuous Employment . For purposes of this Agreement, the continuous employment of the Grantee with the Corporation or a Subsidiary shall not be deemed to have been interrupted, and the Grantee shall not be deemed to have ceased to be

an employee of the Corporation or a Subsidiary, by reason of the transfer of his employment among the Corporation and its Subsidiaries or a leave of absence approved by the Board.

4. No Employment Contract; Right to Terminate Employment. The grant of the RSUs to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant of the RSUs and any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by law. Nothing in this Agreement will give the Grantee any right to continue employment with the Corporation or any Subsidiary, as the case may be, or interfere in any way with the right of the Corporation or a Subsidiary to terminate the employment of the Grantee at any time.

5. Relation to Other Benefits. Any economic or other benefit to the Grantee under this Agreement or the Plan shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Corporation or a Subsidiary and shall not affect the amount of any life insurance coverage available to any beneficiary under any life insurance plan covering employees of the Corporation or a Subsidiary.

6. Information. Information about the Grantee and the Grantee's participation in the Plan may be collected, recorded and held, used and disclosed for any purpose related to the administration of the Plan. The Grantee understands that such processing of this information may need to be carried out by the Corporation and its Subsidiaries and by third party administrators whether such persons are located within the Grantee's country or elsewhere, including the United States of America. The Grantee consents to the processing of information relating to the Grantee and the Grantee's participation in the Plan in any one or more of the ways referred to above.

7. Amendments. Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee with under this Agreement without the Grantee's consent. Notwithstanding the foregoing, the limitation requiring the consent of a Grantee to certain amendments shall not apply to any amendment that is deemed necessary by the Corporation to ensure compliance with Section 409A of the Code.

8. Severability. In the event that one or more of the provisions of this Agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

9. Governing Law. This agreement is made under, and shall be construed in accordance with, the internal substantive laws of the State of Ohio.

10. Compliance with Section 409A of the Code. To the extent applicable, it is intended that this Agreement and the Plan comply with the provisions of Section 409A of the Code, so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to the Grantee. This Agreement and the Plan shall be administered in a manner consistent with this intent. Reference to Section 409A of the Code is to Section 409A of the Internal Revenue Code of 1986, as amended, and will also include any regulations or any other formal guidance promulgated with respect to such Section by the U.S. Department of the Treasury or the Internal Revenue Service.

The undersigned Grantee hereby accepts the award granted pursuant to this Agreement on the terms and conditions set forth herein.

Dated: _____

Grantee

Executed in the name of and on behalf of the Corporation at Cleveland, Ohio as of this ____ day of _____, 2010.

BRUSH ENGINEERED MATERIALS INC.

By _____
[NAME]
[TITLE]

BRUSH ENGINEERED MATERIALS INC.**Appreciation Rights Agreement**

WHEREAS, **[GRANTEE NAME]** (the "Grantee") is an employee of Brush Engineered Materials Inc. (the "Corporation") or a Subsidiary.

WHEREAS, the execution of an agreement in the form hereof has been authorized by a resolution of the Compensation Committee (the "Committee") of the Board of Directors (the "Board") of the Corporation that was duly adopted on February 2, 2009.

NOW, THEREFORE, the Corporation hereby confirms to the Grantee the grant, effective on **February 2, 2010** (the "Date of Grant"), pursuant to the 2006 Stock Incentive Plan (the "Plan"), of _____ Free-standing Appreciation Rights ("SARs") subject to the terms and conditions of the Plan and the terms and conditions described below.

1. Definitions.

As used in this Agreement:

(A) "Base Price" means \$ _____ which was the Market Value per Share on the Date of Grant.

(B) "Detrimental Activity" shall have the meaning set forth in Section 7 of this Agreement.

(C) "Spread" means the excess of the Market value per Share on the date when an SAR is exercised over the Base Price.

(D) Capitalized terms used herein without definition shall have the meanings assigned to them in the Plan.

2. Grant of SARs.

The Corporation hereby grants to the Grantee the number of SARs set forth above. The SARs are a right to receive Common Shares in an amount equal to 100% of the Spread at the time of exercise.

3. Vesting of SARs.

(A) The SARs granted hereby shall become exercisable after the Grantee shall have remained in the continuous employ of the Corporation or any Subsidiary for three years from the Date of Grant, unless the Grantee ceases to be an employee of the Corporation or any Subsidiary as described in Section 5(C) of this Agreement.

(B) Notwithstanding the preceding paragraph, the SARs granted hereby shall become immediately exercisable in full if (i) the Grantee should die while in the employ of the Corporation or any subsidiary; (ii) the Grantee should become permanently disabled while in the employ of the Corporation; or (iii) if a Change in Control occurs.

(C) For purposes of this Agreement, "Change in Control" means:

(i) The acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "Person") of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of voting securities of the Corporation where such acquisition causes such Person to own (X) 20% or more of the combined voting power of the then outstanding voting securities of the Corporation entitled to vote generally in the election of directors (the "Outstanding Corporation Voting Securities") without the approval of the Incumbent Board as defined in (ii) below or (Y) 35% or more of the Outstanding Voting Securities of the Corporation with the approval of the Incumbent Board; provided, however, that for purposes of this subsection (i), the following acquisitions shall not be deemed to result in a Change of Control: (A) any acquisition directly from the Corporation that is approved by the Incumbent Board (as defined in subsection (ii), below), (B) any acquisition by the Corporation or a subsidiary of the Corporation, (C) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Corporation or any corporation controlled by the Corporation, (D) any acquisition by any Person pursuant to a transaction described in clauses (A), (B) and (C) of subsection (iii) below, or (E) any acquisition by, or other Business Combination (as defined in (iii) below) with, a person or group of which employees of the Corporation or any subsidiary of the Corporation control a greater than 25% interest (a "MBO") but only if the Executive is one of those employees of the Corporation or any subsidiary of the Corporation that are participating in the MBO; provided, further, that if any Person's beneficial ownership of the Outstanding Corporation Voting Securities reaches or exceeds 20% or 35%, as the case may be, as a result of a transaction described in clause (A) or (B) above, and such Person subsequently acquires beneficial ownership of additional voting securities of the Corporation, such subsequent acquisition shall be treated as an acquisition that causes such Person to own 20% or 35% or more, as the case may be, of the Outstanding Corporation Voting Securities; and provided, further, that if at least a majority of the members of the Incumbent Board determines in good faith that a Person has acquired beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 20% or more of the Outstanding Corporation Voting Securities inadvertently, and such Person divests as promptly as practicable a sufficient number of shares so that such Person beneficially owns (within the meanings of Rule 13d-3 promulgated under the Exchange Act) less than 20% of the

Outstanding Corporation Voting Securities, then no Change of Control shall have occurred as a result of such Person's acquisition; or

(ii) individuals who, as of the date hereof, constitute the Board (the "Incumbent Board") (as modified by this clause (ii)) cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by the Corporation's shareholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board (either by a specific vote or by approval of the proxy statement of the Corporation in which such person is named as a nominee for director, without objection to such nomination) shall be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board; or

(iii) the consummation of a reorganization, merger or consolidation or sale or other disposition of all or substantially all of the assets of the Corporation or the acquisition of assets of another corporation, or other transaction ("Business Combination") excluding, however, such a Business Combination pursuant to which (A) the individuals and entities who were the ultimate beneficial owners of voting securities of the Corporation immediately prior to such Business Combination beneficially own, directly or indirectly, more than 65% of, respectively, the then outstanding shares of common stock and the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the entity resulting from such Business Combination (including, without limitation, an entity that as a result of such transaction owns the Corporation or all or substantially all of the Corporation's assets either directly or through one or more subsidiaries), (B) no Person (excluding any employee benefit plan (or related trust) of the Corporation, the Corporation or such entity resulting from such Business Combination) beneficially owns, directly or indirectly (X) 20% or more, if such Business Combination is approved by the Incumbent Board or (Y) 35% or more, if such Business Combination is not approved by the Incumbent Board, of the combined voting power of the then outstanding securities entitled to vote generally in the election of directors of the entity resulting from such Business Combination and (C) at least a majority of the members of the board of directors of the corporation resulting from such Business Combination were members of the Incumbent Board at the time of the execution of the initial agreement, or of the action of the Board, providing for such Business Combination; or

(iv) approval by the shareholders of the Corporation of a complete liquidation or dissolution of the Corporation except pursuant to a Business Combination described in clauses (A), (B) and (C) of subsection (iii), above.

4. Exercise of SARs.

(A) To the extent exercisable as provided in Section 3 of this agreement, SARs may be exercised in whole or in part by giving notice to the Corporation specifying the number of SARs to be exercised.

(B) The Corporation will issue to the Grantee the number of Common Shares that equals the Market Price per Share divided into the Spread on the date of exercise rounded down to the nearest whole share.

5. Termination of SARs.

The SARs granted hereby shall terminate upon the earliest to occur of the following:

(A) 190 days after the Grantee ceases to be an employee of the Corporation or a Subsidiary, unless he ceases to be such employee by reason of death or in a manner described in clause (B), (C) or (F) below;

(B) One year after the Grantee ceases to be an employee of the Corporation or a Subsidiary if the Grantee is disabled within the meaning of Section 105(d)(4) of the Internal Revenue Code;

(C) Three years after the Grantee ceases to be an employee of the Corporation or a Subsidiary if the Grantee is at the time of such termination (i) at least age 65 or (ii) at least age 55 and has completed at least 10 years of continuous employment with the Corporation or a Subsidiary;

(D) One year after the death of the Grantee, if the Grantee dies while an employee of the Corporation or a subsidiary or within the period specified in (A) or (B) above which is applicable to the Grantee;

(E) Ten years from the Date of Grant; and

(F) Immediately if the Grantee engages in any Detrimental Activity (as hereinafter defined).

6. Effect of Detrimental Activity.

If the Grantee, either during employment by the Corporation or a subsidiary or within one year after termination of such employment, shall engage in any Detrimental Activity, and the Board shall so find:

(A) All SARs held by the Grantee, whether or not exercisable, shall be forfeited to the Corporation.

(B) Return to the Corporation all Common Shares that the Grantee has not disposed of that were purchased pursuant to this Agreement, and

(C) With respect to any Common Shares that the Grantee received upon exercise of the SARs that have been disposed of pay to the Corporation in cash the amount equal to the Spread applicable to such Common Shares on the date of exercise of such SARs.

To the extent that such amounts are not paid to the Corporation, the Corporation may, to the extent permitted by law, set off the amounts so payable to it against any amounts that may be owing from time to time by the Corporation or a Subsidiary to the Grantee, whether as wages, deferred compensation or vacation pay or in the form of any other benefit or for any other reason.

7. Definition of Detrimental Activity.

For purposes of this Agreement, the term "Detrimental Activity" shall include:

(A) Engaging in any activity in violation of the Section entitled "Competitive Activity; Confidentiality; Nonsolicitation" in the Severance Agreement between the Corporation and the Optionee, if such agreement is in effect on the date hereof, or in violation of any corresponding provision in any other agreement between the Corporation and the Optionee in effect on the date hereof providing for the payment of severance compensation; or

(i) If no such severance agreement is in effect or if a severance agreement does not contain a section corresponding to "Competitive Activity; Confidentiality; Nonsolicitation" as of the date hereof:

(a) Competitive Activity During Employment. Competing with the Corporation anywhere within the United States during the term of the Optionee's employment, including, without limitation:

(1) entering into or engaging in any business which competes with the business of the Corporation;

(2) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business that competes with, the business of the Corporation;

(3) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation or attempting to do so; or

(4) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the business of the Corporation.

(b) Following Termination. For a period of one year following the Optionee's termination date:

(1) entering into or engaging in any business which competes with the Corporation's business within the Restricted Territory (as hereinafter defined);

(2) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business, wherever located, that competes with, the Corporation's business within the Restricted Territory;

(3) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation within the Restricted Territory, or attempting to do so; or

(4) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the Corporation's business within the Restricted Territory.

For the purposes of Sections 7(A)(ii)(a) and (b) above, inclusive, but without limitation thereof, the Optionee will be in violation thereof if the Optionee engages in any or all of the activities set forth therein directly as an individual on the Optionee's own account, or indirectly as a partner, joint venturer, employee, agent, salesperson, consultant, officer and/or director of any firm, association, partnership, corporation or other entity, or as a stockholder of any corporation in which the Optionee or the Optionee's spouse, child or parent owns, directly or indirectly, individually or in the aggregate, more than five percent (5%) of the outstanding stock.

(c) "The Corporation." For the purposes of this Section 7(A)(ii), the "Corporation" shall include any and all direct and indirect subsidiaries, parents, and affiliated, or related companies of the Corporation for which the Optionee worked or had responsibility at the time of termination of the Optionee's employment and at any time during the two year period prior to such termination.

(d) "The Corporation's Business." For the purposes of this Section 7 inclusive, the Corporation's business is defined to be the manufacture, marketing and sale of high performance engineered materials serving global telecommunications and computer, magnetic and optical data storage, aerospace and defense, automotive electronics, industrial components and appliance markets, as further described in any and all manufacturing, marketing and sales manuals and materials of the Corporation as the same may be altered, amended, supplemented or otherwise changed from time to time, or of any other products or services substantially similar to or readily substitutable for any such described products and services.

(e) "Restricted Territory." For the purposes of Section 7(A)(ii)(b), the Restricted Territory shall be defined as and limited to:

(1) the geographic area(s) within a one hundred mile radius of any and all Corporation location(s) in, to, or for which the Optionee worked, to which the Optionee was assigned or had any responsibility (either direct or supervisory) at the time of termination of the Optionee's employment and at any time during the two-year period prior to such termination; and

(2) all of the specific customer accounts, whether within or outside of the geographic area described in (1) above, with which the Optionee had any contact or for which the Optionee had any responsibility (either direct or supervisory) at the time of termination of the Optionee's employment and at any time during the two-year period prior to such termination.

(B) Extension. If it shall be judicially determined that the Optionee has violated any of the Optionee's obligations under Section 7(A)(ii)(b), then the period applicable to each obligation that the Optionee shall have been determined to have violated shall automatically be extended by a period of time equal in length to the period during which such violation(s) occurred.

(B) Non-Solicitation. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include directly or indirectly at any time soliciting or inducing or attempting to solicit or induce any employee(s), sales representative(s), agent(s) or consultant(s) of the Corporation and/or of its parents, or its other subsidiaries or affiliated or related companies to terminate their employment, representation or other association with the Corporation and/or its parent or its other subsidiary or affiliated or related companies.

(C) Further Covenants. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include:

(ii) directly or indirectly, at any time during or after the Optionee's employment with the Corporation, disclosing, furnishing, disseminating, making available or, except in the course of performing the Optionee's duties of employment, using any trade secrets or confidential business and technical information of the Corporation or its customers or vendors, including without limitation as to when or how the Optionee may have acquired such information. Such confidential information shall include, without limitation, the Corporation's unique selling, manufacturing and servicing methods and business techniques, training, service and business manuals, promotional materials, training courses and other training and instructional materials, vendor and product information, customer and prospective customer lists, other customer and prospective customer information and other business information. The Optionee specifically acknowledges that all such confidential information, whether reduced to writing, maintained on any form of electronic media, or maintained in the Optionee's mind or memory and whether compiled by the Corporation, and/or the Optionee, derives independent economic value from not being readily known to or ascertainable by proper means by others who can obtain economic value from its

disclosure or use, that reasonable efforts have been made by the Corporation to maintain the secrecy of such information, that such information is the sole property of the Corporation and that any retention and use of such information by the Optionee during the Optionee's employment with the Corporation (except in the course of performing the Optionee's duties and obligations to the Corporation) or after the termination of the Optionee's employment shall constitute a misappropriation of the Corporation's trade secrets.

(iii) Upon termination of the Optionee's employment with the Corporation, for any reason, the Optionee's failure to return to the Corporation, in good condition, all property of the Corporation, including without limitation, the originals and all copies of any materials which contain, reflect, summarize, describe, analyze or refer or relate to any items of information listed in Section 4(C)(i) of this Agreement.

(D) Discoveries and Inventions. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include the failure or refusal of the Optionee to assign to the Corporation, its successors, assigns or nominees, all of the Optionee's rights to any discoveries, inventions and improvements, whether patentable or not, made, conceived or suggested, either solely or jointly with others, by the Optionee while in the Corporation's employ, whether in the course of the Optionee's employment with the use of the Corporation's time, material or facilities or that is in any way within or related to the existing or contemplated scope of the Corporation's business. Any discovery, invention or improvement relating to any subject matter with which the Corporation was concerned during the Optionee's employment and made, conceived or suggested by the Optionee, either solely or jointly with others, within one year following termination of the Optionee's employment under this Agreement or any successor agreements shall be irrebuttably presumed to have been so made, conceived or suggested in the course of such employment with the use of the Corporation's time, materials or facilities. Upon request by the Corporation with respect to any such discoveries, inventions or improvements, the Optionee will execute and deliver to the Corporation, at any time during or after the Optionee's employment, all appropriate documents for use in applying for, obtaining and maintaining such domestic and foreign patents as the Corporation may desire, and all proper assignments therefor, when so requested, at the expense of the Corporation, but without further or additional consideration.

(E) Work Made For Hire. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include violation of the Corporation's rights in any or all work papers, reports, documentation, drawings, photographs, negatives, tapes and masters therefor, prototypes and other materials (hereinafter, "items"), including without limitation, any and all such items generated and maintained on any form of electronic media, generated by Optionee during the Optionee's employment with the Corporation. The Optionee acknowledges that, to the extent permitted by law, all such items shall be considered a "work made for hire" and that ownership of any and all copyrights in any and all such items shall belong to the Corporation. The item will recognize the Corporation as the copyright owner, will contain all proper copyright notices, e.g., "(creation date) [Corporation Name], All Rights Reserved," and will be in condition to be registered or otherwise placed in compliance with registration or other statutory requirements throughout the world.

(F) Termination for Cause. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include activity that results in termination for Cause. For the purposes of this Section, "Cause" shall mean that, the Optionee shall have:

(iv) been convicted of a criminal violation involving fraud, embezzlement, theft or violation of federal antitrust statutes or federal securities laws in connection with his duties or in the course of his employment with the Corporation or any affiliate of the Corporation;

(v) committed intentional wrongful damage to property of the Corporation or any affiliate of the Corporation; or

(vi) committed intentional wrongful disclosure of secret processes or confidential information of the Corporation or any affiliate of the Corporation;

and any such act shall have been demonstrably and materially harmful to the Corporation.

(G) Other Injurious Conduct. Detrimental Activity shall also include any other conduct or act determined to be injurious, detrimental or prejudicial to any significant interest of the Corporation or any subsidiary unless the Optionee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation.

(H) Reasonableness. The Optionee acknowledges that the Optionee's obligations under this Section 4 are reasonable in the context of the nature of the Corporation's business and the competitive injuries likely to be sustained by the Corporation if the Optionee were to violate such obligations. The Optionee further acknowledges that this Agreement is made in consideration of, and is adequately supported by the agreement of the Corporation to perform its obligations under this Agreement and by other consideration, which the Optionee acknowledges constitutes good, valuable and sufficient consideration.

8. Transferability.

No SAR granted hereunder may be transferred by the Grantee other than by will or the laws of descent and distribution and may be exercised during a Grantee's lifetime only by the Grantee or, in the event of the Grantee legal incapacity, by the Grantee's guardian or legal representative acting in a fiduciary capacity on behalf of the Grantee under state law and court supervision.

9. Compliance with Law.

The SARs granted hereby shall not be exercisable if such exercise would involve a violation of any applicable federal or state securities law, and the Corporation hereby agrees to make reasonable efforts to comply with any applicable state securities law. If the Ohio Securities Act shall be applicable to this option, it shall not be exercisable unless under said Act at the time of exercise the shares of Common Stock or other securities purchasable hereunder are

exempt, are the subject matter of an exempt transaction, are registered by description or by qualification, or at such time are the subject matter of a transaction which has been registered by description.

10. Adjustments.

In the event of any change in the aggregate number of outstanding Common Shares by reason of (a) any stock dividend, stock split, combination of shares, recapitalization or other change in the capital structure of the Corporation, or (b) any merger, consolidation, spin-off, spin-out, split-off, split-up, reorganization, partial or complete liquidation of the Corporation or other distribution of assets, issuance of rights or warrants to purchase securities of the Corporation, or (c) any other corporate transaction or event having an effect similar to any of the foregoing, then the Committee shall adjust the number of SARs covered by this Agreement and the Base Price in such manner as may be appropriate to prevent the dilution or enlargement of the rights of the Grantee that would otherwise result from such event.

11. Withholding Taxes.

To the extent that the Corporation is required to withhold federal, state, local or foreign taxes in connection with the exercise of the SARs, and the amounts available to the Corporation for such withholding are insufficient, it shall be a condition to such exercise that the Grantee make arrangements satisfactory to the Corporation for payment of the balance of such taxes required to be withheld. The Grantee may elect that all or any part of such withholding requirement be satisfied by retention by the Corporation of a portion of the Common Shares to be delivered to the Grantee. If such election is made, the shares so retained shall be credited against such withholding requirement at the Market Value per Share on the date of such exercise. In no event shall the Market Value per Share of the Common Shares to be withheld and/or delivered pursuant to this Section to satisfy applicable withholding taxes in connection with the benefit exceed the minimum amount of taxes required to be withheld.

12. Continuous Employment.

For purposes of this Agreement, the continuous employment of the Grantee with the Corporation or a Subsidiary shall not be deemed to have been interrupted, and the Grantee shall not be deemed to have ceased to be an employee of the Corporation or a Subsidiary, by reason of the transfer of his employment among the Corporation and its Subsidiaries or a leave of absence approved by the Board.

13. No Employment Contract; Right to Terminate Employment.

The grant of the SARs under this Agreement to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant of the SARs and any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by law. Nothing in this Agreement will give the Grantee any right to continue employment with the Corporation or any Subsidiary, as the case may be, or interfere in any way with the right of the Corporation or a Subsidiary to terminate the employment of the Grantee at any time.

14. Relation to Other Benefits.

Any economic or other benefit to the Grantee under this Agreement or the Plan shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Corporation or a Subsidiary and shall not affect the amount of any life insurance coverage available to any beneficiary under any life insurance plan covering employees of the Corporation or a Subsidiary.

15. Information.

Information about the Grantee and the Grantee's participation in the Plan may be collected, recorded and held, used and disclosed for any purpose related to the administration of the Plan. The Grantee understands that such processing of this information may need to be carried out by the Corporation and its Subsidiaries and by third party administrators whether such persons are located within the Grantee's country or elsewhere, including the United States of America. The Grantee consents to the processing of information relating to the Grantee and the Grantee's participation in the Plan in any one or more of the ways referred to above.

16. Amendments.

Any amendment to the Plan shall be deemed to be an amendment to this agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee with respect to the SARs without the Grantee's consent.

17. Severability.

In the event that one or more of the provisions of this agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

18. Governing Law.

This agreement is made under, and shall be construed in accordance with the internal substantive laws of the State of Ohio.

The undersigned hereby acknowledges receipt of an executed original of this Appreciation Rights Agreement and accepts the Appreciation Rights granted thereunder on the terms and conditions set forth herein and in the Plan.

Date: _____

[GRANTEE NAME]

Executed in the name and on behalf of the Corporation at Cleveland, Ohio as of the 15th day of March 2010.

BRUSH ENGINEERED MATERIALS INC.

By: _____

Subsidiaries of Registrant

The Company has the following subsidiaries, all of which are wholly owned and included in the consolidated financial statements.

Name of Subsidiary	State or Country of Incorporation
Barr Associates, Inc.	Massachusetts
BEM Services, Inc.	Ohio
Brush Wellman Inc.	Ohio
Brush Ceramic Products Inc.	Arizona
Brush International, Inc.	Ohio
Brush Resources Inc.	Utah
Brush Wellman GmbH	Germany
Brush Wellman (Japan) Ltd.	Japan
Brush Wellman Limited	England
Brush Wellman (Singapore) Pte Ltd.	Singapore
CERAC, incorporated	Wisconsin
OMC Scientific Czech s.r.o.	Czech Republic
OMC Scientific Holdings Limited	Ireland
Techni-Met, LLC	Connecticut
Technical Materials, Inc.	Ohio
Thin Film Technology, Inc.	California
Williams Advanced Materials Inc.	New York
Williams Advanced Materials Far East Pte Ltd.	Singapore
Williams Advanced Materials Japan Inc.	Japan
Williams Advanced Materials (Netherlands) B.V.	Netherlands
Williams Advanced Materials (Suzhou) Ltd.	China
Williams Advanced Materials Technologies Taiwan Co. Ltd.	Taiwan
Zentrix Technologies Inc.	Arizona

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement Number 333-88994 on Form S-8 dated May 24, 2002;
- (2) Post-Effective Amendment Number 1 to Registration Statement Number 333-74296 on Form S-8 dated November 30, 2001;
- (3) Post-Effective Amendment Number 5 to Registration Statement Number 2-64080 on Form S-8 dated May 17, 2000;
- (4) Post-Effective Amendment Number 1 to Registration Statement Number 333-63355 on Form S-8 dated May 17, 2000;
- (5) Post-Effective Amendment Number 1 to Registration Statement Number 33-28605 on Form S-8 dated May 17, 2000;
- (6) Post-Effective Amendment Number 1 to Registration Statement Number 333-63353 on Form S-8 dated May 17, 2000;
- (7) Post-Effective Amendment Number 1 to Registration Statement Number 333-63357 on Form S-8 dated May 17, 2000;
- (8) Post-Effective Amendment Number 1 to Registration Statement Number 333-52141 on Form S-8 dated May 17, 2000;
- (9) Post-Effective Amendment Number 1 to Registration Statement Number 2-90724 on Form S-8 dated May 17, 2000;
- (10) Registration Statement Number 333-63353 on Form S-8 dated September 14, 1998;
- (11) Registration Statement Number 333-63355 on Form S-8 dated September 14, 1998;
- (12) Registration Statement Number 333-63357 on Form S-8 dated September 14, 1998;
- (13) Registration Statement Number 333-52141 on Form S-8 dated May 5, 1998;
- (14) Registration Statement Number 33-28605 on Form S-8 dated May 5, 1989;
- (15) Registration Statement Number 2-90724 on Form S-8 dated April 27, 1984;
- (16) Post-Effective Amendment Number 3 to Registration Statement Number 2-64080 on Form S-8 dated April 22, 1983;
- (17) Registration Statement Number 333-114147 on Form S-3 dated July 1, 2004;
- (18) Registration Statement Number 333-127130 on Form S-8 dated August 3, 2005;
- (19) Registration Statement Number 333-133428 on Form S-8 dated April 20, 2006;
- (20) Registration Statement Number 333-133429 on Form S-8 dated April 20, 2006; and
- (21) Registration Statement Number 333-145149 on Form S-8 dated August 6, 2007

of our report dated March 5, 2010, with respect to the consolidated financial statements of Brush Engineered Materials Inc. and subsidiaries and our report dated March 5, 2010, with respect to the effectiveness of internal control over financial reporting of Brush Engineered Materials Inc. and subsidiaries both included in this Annual Report (Form 10-K) of Brush Engineered Materials Inc. and subsidiaries for the year ended December 31, 2009.

Cleveland, Ohio
March 5, 2010

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each of the undersigned directors and officers of BRUSH ENGINEERED MATERIALS INC., an Ohio corporation (the "Corporation"), hereby constitutes and appoints Richard J. Hipple, John D. Grampa, Michael C. Hasychak and Michael J. Solecki, and each of them, their true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for them and in their names, place and stead, to sign on their behalf as a director or officer, or both, as the case may be, of the Corporation, an Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2009, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission granting unto said attorney or attorneys-in-fact, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as they might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned have hereunto set their hands as of the 8th day of March, 2010.

/s/ Richard J. Hipple
Richard J. Hipple, Chairman, President,
Chief Executive Officer and Director
(Principal Executive Officer)

/s/ William P. Madar
William P. Madar, Director

/s/ John D. Grampa
John D. Grampa, Senior Vice President
Finance and Chief Financial Officer
(Principal Financial Officer)

/s/ William G. Pryor
William G. Pryor, Director

/s/ Albert C. Bersticker
Albert C. Bersticker, Director

/s/ N. Mohan Reddy
N. Mohan Reddy, Director

/s/ Joseph P. Keithley
Joseph P. Keithley, Director

/s/ William R. Robertson
William R. Robertson, Director

/s/ Vinod M. Khilnani
Vinod M. Khilnani, Director

/s/ John Sherwin, Jr.
John Sherwin, Jr, Director

/s/ William B. Lawrence
William B. Lawrence, Director

/s/ Craig S. Shular
Craig S. Shular, Director

CERTIFICATIONS

I, Richard J. Hipple, certify that:

- 1) I have reviewed this annual report on Form 10-K of Brush Engineered Materials Inc. (the "registrant");
- 2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;
- 4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 8, 2010

/s/ Richard J. Hipple

Richard J. Hipple
Chairman, President and Chief Executive
Officer

CERTIFICATIONS

I, John D. Grampa, certify that:

- 1) I have reviewed this annual report on Form 10-K of Brush Engineered Materials Inc. (the "registrant");
- 2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 8, 2010

/s/ John D. Grampa

John D. Grampa
Senior Vice President Finance and
Chief Financial Officer

Certification Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, in connection with the filing of the Annual Report on Form 10-K of Brush Engineered Materials Inc. (the "Company") for the year ended December 31, 2009, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, that, to such officer's knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)), and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Dated: March 8, 2010

/s/ Richard J. Hipple
Richard J. Hipple
Chairman of the Board, President and
Chief Executive Officer

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