
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, 2008

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)**6070 Parkland Blvd., Mayfield Hts., Ohio**

(Address of principal executive offices)

34-1919973(I.R.S. Employer
Identification No.)**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 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 ☐

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 June 27, 2008 was \$521,755,594.

As of February 13, 2009, there were 20,108,960 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 6, 2009 are incorporated by reference into Part III.

BRUSH ENGINEERED MATERIALS INC.

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PART I

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 and domestic economies, including the uncertainties related to the impact of the current 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, data storage, aerospace and defense, automotive electronics, industrial components, appliance and medical;
- Changes in product mix and the financial condition of customers;
- Actual sales, operating rates and margins for the year 2009;
- Our success in developing and introducing new products and new product ramp-up rates, especially in the media market;
- 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 recent acquisition of the assets of Techni-Met, Inc.;
- Our success in implementing our strategic plans and the timely and successful completion of any capital projects;
- The availability of adequate lines of credit and the associated interest rates;
- Other financial factors, including cost and availability of raw materials (both base and precious metals), tax rates, exchange rates, interest 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 and deferred 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 high performance advanced enabling engineered materials serving the global telecommunications and computer, data storage, aerospace and defense, automotive electronics, industrial components, appliance and medical markets. As of December 31, 2008, we had 2,235 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). 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).

Our parent company, Brush Engineered Materials Inc., and other corporate expenses, as well as the operating results from BEM Services, Inc., Zentrix Technologies Inc. (Zentrix) and Circuits Processing Technology, Inc. (CPT), all wholly owned subsidiaries, are not part of any segment and remain in All Other. BEM Services, Inc. charges a management fee for the services it provides, primarily corporate, administrative and financial oversight, to our other businesses on a cost-plus basis. Zentrix manufactures electronic packages and other components for sale to the telecommunications and computer and automotive electronics markets, and CPT manufactured circuitry for defense and commercial applications. CPT was sold in March of 2007. Corporate employees not covered as part of a reportable segment, including employees of BEM Services, Inc. and Zentrix, totaled 149 as of December 31, 2008.

Our website address is www.beminc.com. Information contained on our website does not constitute part of this Form 10-K. We make available, free of charge through our website, our Annual Report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, as well as amendments to those reports, as soon as reasonably practicable after we file such reports with, or furnish such reports to, the Securities and Exchange Commission.

ADVANCED MATERIAL TECHNOLOGIES AND SERVICES

AMTS is comprised of WAM. Sales for this segment were \$466.4 million or 51% of total sales in 2008, \$519.9 million or 54% of total sales in 2007 and \$343.4 million or 45% of total sales in 2006. As of December 31, 2008, AMTS had 743 employees.

AMTS manufactures and fabricates precious, non-precious and specialty metal products for the data storage, medical and the wireless, photonics, semiconductor and hybrid segments of the microelectronics market. AMTS also has refining capabilities for the reclaim of precious and non-precious metals from internally or customer-generated scrap. In addition, AMTS provides chamber services for its customers to reclaim precious metals and refurbish reusable components used in its customers' vapor deposition systems. AMTS' major product lines include vapor deposition targets, clad and precious metals preforms, high temperature braze materials, ultra fine wire, sealing lids for the semiconductor/hybrid markets and specialty inorganic materials. In February 2008, AMTS purchased the assets of Techni-Met, Inc. based in Windsor, Connecticut, which supplies a wide range of high end applications for advanced technology industries, including supporting downstream customers in developing more accurate diagnostic devices for diabetes management.

AMTS' products are sold directly from its facilities in Buffalo, New York; Brewster, New York; Wheatfield, New York; Buellton, California; Milwaukee, Wisconsin; Windsor, Connecticut; Santa Clara, California; Ireland; Singapore; Taiwan; Japan; Korea; the Philippines; China and the Czech Republic, 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, 2008, 2007 and 2006 was \$31.0 million, \$23.8 million and \$28.7 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, 2008 will be filled during 2009.

Sales are made to over 2,800 customers. Government sales, principally subcontracts, accounted for less than 1% of the sales volume in 2008, 2007 and 2006. Sales outside the United States, principally to Europe and Asia, accounted for approximately 24% of sales in 2008, 30% of sales in 2007 and 18% of sales in 2006. 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 \$2.4 million in 2008, \$1.6 million in 2007 and \$0.4 million in 2006. A staff of 19 scientists, engineers and technicians was employed in this effort as of year-end 2008.

SPECIALTY ENGINEERED ALLOYS

SEA sells strip products, bulk products and beryllium hydroxide (BRI). Sales for this segment were \$299.9 million or 33% of total sales in 2008, \$290.0 million or 30% of total sales in 2007 and \$275.6 million, or 36% of total sales in 2006. As of December 31, 2008, SEA had 893 employees.

SEA manufactures beryllium-containing and other high performance-based materials including copper-nickel-tin alloys that are metallurgically tailored to meet specific customer performance requirements. These products exhibit high electrical and thermal conductivities, high strength and hardness, good formability, lubricity, and excellent resistance to corrosion, wear and fatigue. These alloys, sold in strip and bulk form, are ideal choices for demanding applications in the telecommunications and computer, aerospace, industrial components (including oil and gas, heavy equipment and plastic mold tooling) and appliance markets. These products are sold domestically through SEA and independent distribution centers and internationally through Company-owned and independent distribution centers and independent sales representatives.

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. In the area of bulk products (bar, plate, tube and rod), in addition to NGK Insulators, SEA competes with several smaller regional producers such as Freedom Alloys in the United States, LaBronze Industriel in Europe and Young II in Asia.

SEA, through BRI, manages our mine and milling operations. The milling operations produce beryllium hydroxide from mined bertrandite ore and purchased beryl ore. The beryllium hydroxide is used primarily as a raw material input by the other businesses within the Company. BRI also sells beryllium hydroxide externally to SEA's primary competitor in beryllium alloys, NGK Insulators, Ltd.

Specialty Engineered Alloys — Sales and Backlog

The backlog of unshipped orders for SEA as of December 31, 2008, 2007 and 2006 was \$55.5 million, \$71.5 million and \$62.1 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, 2008 will be filled during 2009.

Sales are made to over 2,200 customers. SEA had no government sales in 2008, and such sales, principally subcontracts, were less than 1% of segment sales in 2007 and 2006. Sales outside the United States, principally to Europe and Asia, accounted for approximately 57% of sales in 2008 and 55% of sales in 2007 and 2006. 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 \$2.3 million in 2008, \$1.9 million in 2007 and \$2.1 million in 2006. A staff of eight scientists, engineers and technicians was employed in this effort as of year-end 2008.

BERYLLIUM AND BERYLLIUM COMPOSITES

Beryllium and Beryllium Composites includes Beryllium Products and Brush Ceramic Products Inc. Sales for this segment were \$63.6 million or 7% of total sales in 2008, \$60.5 million or 6% of total sales in 2007 and \$57.6 million or 8% of total sales in 2006. As of December 31, 2008, Beryllium and Beryllium Composites had 272 employees.

Beryllium and Beryllium Composites manufactures products that include beryllium and AlBeMet[®]. Beryllium is a lightweight metal possessing unique mechanical and thermal properties. Its specific stiffness is much greater than other engineered structural materials such as aluminum, titanium and steel. Beryllium is extracted from both bertrandite ore, which is mined by the Company, and imported beryl ore. In June 2008, we announced that Brush Wellman Inc. had entered into an agreement with the Department of Defense to construct a \$90.4 million primary beryllium facility. This facility will produce primary beryllium, the feedstock material used to produce beryllium metal products. Construction of this facility is targeted for completion in 2010. Beryllium products are used in a variety of high performance applications in the defense, space, industrial, scientific equipment, electronics (including acoustics), medical, automotive electronics and optical scanning markets. 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 with other fabricators as well as with designs utilizing other materials.

Beryllium and Beryllium Composites also manufactures beryllia ceramics for electronic packaging and electro-optical applications including lasers. Electronic components utilizing beryllia are used in the telecommunications, medical, industrial, automotive 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, 2008, 2007 and 2006 was \$28.7 million, \$23.9 million and \$18.4 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, 2008 will be filled during 2009.

Sales are made to over 300 customers. Government sales, principally subcontracts, accounted for less than 1% of Beryllium and Beryllium Composites' sales in 2008, and 1% of segment sales in 2007 and 2006. Sales outside the United States, principally to Europe and Asia, accounted for approximately 23% of sales in 2008, 16% of sales in 2007 and 29% of sales in 2006. 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 \$1.3 million in 2008, \$1.0 million in 2007 and \$1.1 million in 2006. A staff of eight scientists, engineers and technicians was employed in this effort as of year-end 2008. Some research and development projects, expenditures for which are not material, were externally sponsored and funded.

ENGINEERED MATERIAL SYSTEMS

Engineered Material Systems is comprised of TMI. Sales for this segment were \$65.9 million or 7% of total sales in 2008, \$70.9 million or 7% of total sales in 2007 and \$68.7 million or 9% of total sales in 2006. As of December 31, 2008, Engineered Material Systems had 178 employees.

Engineered Material Systems manufactures engineered material systems, which include clad inlay and overlay metals, precious and base metal electroplated systems, electron beam welded systems, contour profiled systems and solder-coated metals systems. These products are used in telecommunications and computer systems, data storage, automotive electronics, semi-conductors, energy, defense and medical applications. 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, 2008, 2007 and 2006 was \$7.6 million, \$12.2 million and \$16.1 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2008 will be filled during 2009.

Sales are made to approximately 200 customers. Engineered Material Systems did not have any sales to the government for 2008, 2007 or 2006. Sales outside the United States, principally to Europe and Asia, accounted for approximately 17% of Engineered Material Systems' sales in 2008, 12% of sales in 2007 and 9% of sales in 2006. 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 2008, 2007 and 2006.

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. A new bertrandite pit has been developed at our Utah mine site and we began extracting ore in early 2008. 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	56	<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	61	<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	59	<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 machining and manufacturing of beryllium-containing products 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 noncompliance. 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 or to 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, at one time we produced beryllium-copper alloys that were used in the production of some golf club heads, but these beryllium-copper alloy club heads are no longer produced by any of our customers. 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 pebble plant for primary beryllium feedstocks. We may experience government funding delays or cancellations, 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 pebble plant could negatively impact the Beryllium and Beryllium Composites segment.

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 employee 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.

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. In addition, we have experienced, on one occasion, a quality issue during the manufacturing ramp up of a new product. 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, data storage, aerospace and defense, automotive electronics, industrial components 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 current global economic crisis is having a negative impact on our financial performance.

The global economic crisis continues to adversely affect the domestic and global economies. 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 50% of our sales in 2008. 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 and acquire other businesses. 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 current 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 2008, 43% in 2007, and 35% in 2006. We anticipate that international shipments will account for a significant portion of our sales for the foreseeable future. Revenue from non-United States operations (principally Europe and Asia) amounted to approximately 24% of our sales in 2008, 25% in 2007, and 23% in 2006. 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”, found on page 6 of this Form 10-K 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”, found on page 7 on this Form 10-K. 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 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. We use ruthenium for the manufacture of perpendicular magnetic recording technology products for the data storage market. Ruthenium is not widely used or traded on a public market and therefore there is no established market for hedging price exposure. Although our selling price is generally based on our cost to purchase ruthenium, the inventory carrying value may be exposed to market fluctuations. For example, we experienced a 66% drop in the price of ruthenium during the fourth quarter 2008.

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

Because many of our European and automotive electronics customers slow or cease operations during the summer months, we sometimes experience weaker demand in the quarters ending in September compared to the quarters ending in March, June and December. We expect this seasonal pattern to continue, which causes our quarterly results to fluctuate. 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, in 2005, Delphi Corporation, a customer of three of our business units and the largest United States supplier of automotive parts, filed for bankruptcy protection. To date, Delphi has not emerged from bankruptcy reorganization. Any of those events could also affect other suppliers to our customers. In either case, those 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," found on page 16 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 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", found on page 16 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 physical 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 domestic and 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 recent 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, 2008, 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, 2008 was a loss of 24%.

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 \$18.3 million to our pension plan in 2009. If our current assumptions and estimates are not correct, a contribution in years beyond 2009 may be greater than the projected 2009 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 decreased the assumed rate at which health care costs will increase for the next year to 8% at December 31, 2008 from 9% at December 31, 2007. In addition, we have assumed that this health care cost increase trend rate will decline to 5% by 2012. 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 \$0.8 million at December 31, 2008.

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 2008, 43% in 2007 and 35% in 2006. 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 liability relating to outstanding foreign currency contracts was \$1.2 million at December 31, 2008, indicating that the average hedge rates were unfavorable 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 pursuant to Statement No. 142 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, 2008 was \$35.8 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 2008, 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, 2008, 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>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 ⁽⁵⁾	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
Wheatfield, New York ⁽¹⁾	Owned	35,000
Windsor, Connecticut ⁽¹⁾	Leased	34,700
<i>Corporate and Administrative Offices</i>		
Mayfield Heights, Ohio ⁽²⁾⁽³⁾⁽⁵⁾	Leased	53,800
<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	19,700
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, there are 7,500 acres in Juab County, Utah with respective mineral rights from which the beryllium-bearing ore, bertrandite, is mined by the open pit method. A portion of the mineral rights is 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, 2008, our subsidiary, Brush Wellman Inc., was a defendant in nine proceedings in various state and federal courts brought by plaintiffs alleging that they have contracted, or have been placed at risk of contracting, 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, 2007 there were nine beryllium cases (involving 31 plaintiffs) and as of December 31, 2008, there were nine beryllium cases (involving 36 plaintiffs). During 2008:

- one case (involving six plaintiffs) was filed;
- as previously reported, one case (involving one plaintiff) had been voluntarily dismissed by the plaintiff during the fourth quarter of 2007, but the Company was not made aware of this until 2008.

In addition, in one purported class action (involving one named plaintiff), the court granted summary judgment of all defendants and dismissed the complaint, but the plaintiff has filed an appeal. In a second purported class action (involving nine named plaintiffs), the court denied the motion for class certification, but the plaintiffs have filed an appeal.

The nine pending beryllium cases as of December 31, 2008 fall into two categories: Seven cases involving third-party individual plaintiffs, with 20 individuals (and four spouses who have filed claims as part of their spouse's case and two children who have filed claims as part of their parent's case) and two purported class actions, involving ten named plaintiffs, as discussed more fully below. Claims brought by third-party plaintiffs (typically employees of our customers or contractors) are generally covered by varying levels of insurance.

The first purported class action is 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 are Manuel Marin, Lisa Marin, Garfield Perry and Susan Perry. The defendants are 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 are Robert Thomas, Darnell White, Leonard Joffrion, James Jones and John Kesselring. The plaintiffs allege that they have been sensitized to beryllium while employed at the Boeing Company. The plaintiffs' wives claim loss of consortium. The plaintiffs purport to represent two classes of approximately 250 members each, one consisting of workers who worked at Boeing or its predecessors and are beryllium sensitized and the other consisting of their spouses. They have 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 seek 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 represent current and past employees of Boeing in California; and Ms. Marin and Ms. Perry are 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.

The second 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.

Subsequent Events

From January 1, 2009 to February 20, 2009, in one case (involving five plaintiffs), there was a stipulation of voluntary dismissal of one plaintiff. In one case (involving six plaintiffs), the court granted the plaintiffs' motion to add two additional plaintiffs. In one case (involving eight plaintiffs), in which the trial court had granted summary judgment on all claims, the Court of Appeals affirmed the trial court's judgment on January 13, 2009; the plaintiffs sought a rehearing by the Court of Appeals, which was denied by the Court on February 10, 2009.

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 has 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.

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.

Subsequent Events

Pursuant to various stipulations filed by the parties in the CA Action, 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, dismissal with prejudice of all claims by Target against WAM and its defendant customers, and dismissal without prejudice of the counterclaims by WAM and its defendant customers, the exception being the remaining declaratory judgment count on patent ownership. Also following motions filed by the parties, the Court in the CA Action on January 26, 2009 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 parties have resumed pre-trial proceedings with a trial currently expected to be held in 2010.

Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the fiscal fourth quarter of 2008.

PART II

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

Market Information and Dividends

(a) The Company's common shares are listed on the New York Stock Exchange under the symbol "BW". As of February 13, 2009 there were approximately 1,440 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 2008 and 2007. We did not pay any dividends in 2008 or 2007. 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>
2008		
First	\$38.12	\$23.77
Second	34.63	24.60
Third	31.27	19.07
Fourth	19.41	6.98
2007		
First	\$50.45	\$30.58
Second	61.82	39.70
Third	53.00	34.17
Fourth	58.74	33.57

On August 1, 2008, we announced that our Board of Directors had approved a share repurchase program authorizing the purchase of up to one million (1,000,000) of our common shares. The share repurchases may be made from time to time through brokers on the New York Stock Exchange. The repurchase program may be suspended or discontinued at any time.

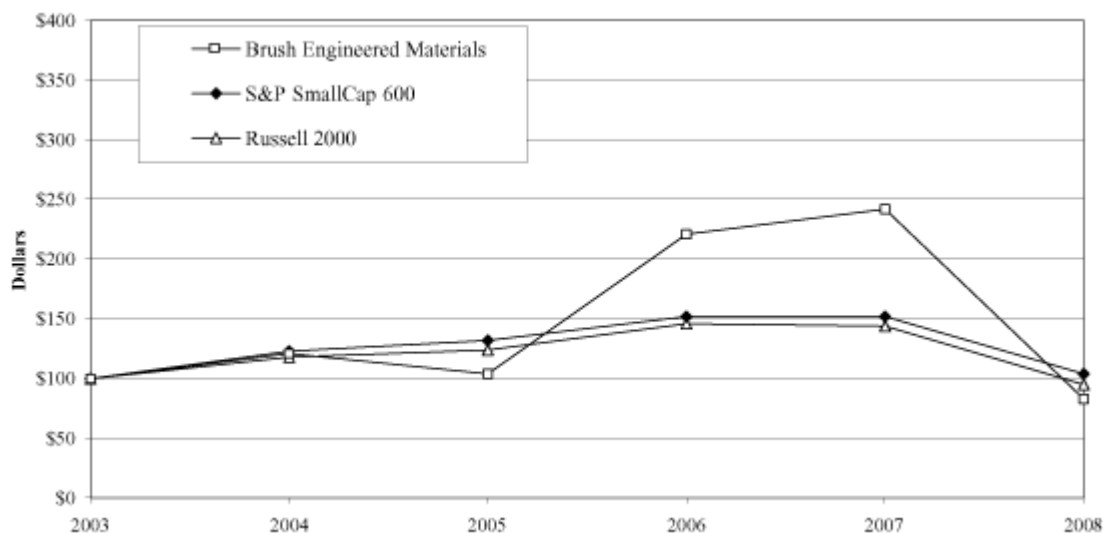
During the three months ended December 31, 2008, we repurchased 223,114 shares under this program at an average price of \$13.03. On December 31, 2008, we also reacquired common shares in connection with employee compensation plans, which were not part of the share repurchase program. Additional information about these transactions is presented in the table below.

	<u>Total Number of Shares Purchased</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs</u>	<u>Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs</u>
September 27 through October 31, 2008	40,000	\$ 13.35	40,000	883,114
November 1 through November 28, 2008	183,114	\$ 12.96	183,114	700,000
November 29 through December 31, 2008	26,149(1)	\$ 12.72		
	28,280(2)	\$ 12.72		
	3,993(3)	\$ 13.46		

- (1) Represents common shares surrendered to us to satisfy tax withholding requirements on performance restricted shares granted to employees under our 2006 Stock Incentive Plan (2006 Plan).
- (2) Represents common shares surrendered to us by employees holding performance restricted shares granted under the 2006 Plan to correct overpayment of incentive compensation for 2007.
- (3) Represents common shares purchased for directors who elected to defer their annual director fees and are held in a rabbi trust established under our 2006 Non-employee Directors' Equity Plan.

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.



	2003	2004	2005	2006	2007	2008
Brush Engineered Materials	\$ 100	\$ 121	\$ 104	\$ 221	\$ 242	\$ 83
S&P SmallCap 600	\$ 100	\$ 123	\$ 132	\$ 152	\$ 152	\$ 104
Russell 2000	\$ 100	\$ 118	\$ 124	\$ 146	\$ 144	\$ 95

The above graph assumes that the value of our common shares and each index was \$100 on December 31, 2003 and that all dividends, if paid, were reinvested.

Item 6. SELECTED FINANCIAL DATA

Brush Engineered Materials Inc. and Subsidiaries

Subsequent to the earnings release of the Company's unaudited Consolidated Statements of Income for the Years Ended December 31, 2008, 2007 and 2006 on February 5, 2009, adjustments were recorded to accounts payable and other balance sheet accounts that resulted in an \$0.8 million increase in cost of sales for 2008. Gross margin and operating profit were reduced by this same amount from what was previously released. Net income for 2008 was reduced from \$18.9 million to \$18.4 million and diluted earnings per share from \$0.92 to \$0.89. The data presented in the following chart, as well as the data presented in Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7 and the Financial Statements and Supplementary Data in Item 8 of this Annual Report on Form 10-K include the impact of these adjustments.

(Dollars in thousands except for share and per share data)	2008	2007	2006	2005	2004
For the year					
Net sales	\$ 909,711	\$ 955,709	\$ 763,054	\$ 541,267	\$ 496,276
Cost of sales	757,567	759,037	600,882	431,024	385,202
Gross profit	152,144	196,672	162,172	110,243	111,074
Operating profit	28,071	84,465	43,840	19,509	25,034
Interest expense — net	1,995	1,760	4,135	6,372	8,377
Income from continuing operations before income taxes	26,076	82,705	39,705	13,137	16,657
Income taxes (benefit)	7,719	29,420	(9,898)	(4,688)	1,141
Net income	18,357	53,285	49,603	17,825	15,516
Earnings per share of common stock:					
Basic net income	0.90	2.62	2.52	0.93	0.87
Diluted net income	0.89	2.59	2.45	0.92	0.85
Depreciation and amortization	34,204	24,296	25,141	22,790	23,826
Capital expenditures	35,515	26,429	15,522	13,775	9,093
Mine development expenditures	421	7,121	—	—	57
Year-end position					
Working capital	189,899	216,253	158,061	115,531	108,799
Ratio of current assets to current liabilities	2.8 to 1	2.9 to 1	2.4 to 1	2.4 to 1	2.0 to 1
Property and equipment:					
At cost	635,266	583,961	557,861	540,420	540,937
Cost less depreciation and impairment	207,254	186,175	175,929	177,062	177,619
Total assets	581,897	550,551	498,606	402,702	414,181
Other long-term liabilities	116,524	69,140	70,731	73,492	60,527
Long-term debt	10,605	10,005	20,282	32,916	41,549
Shareholders' equity	347,097	353,714	291,000	211,478	208,138
Weighted-average number of shares of stock outstanding:					
Basic	20,335,000	20,320,000	19,665,000	19,219,000	17,865,000
Diluted	20,543,000	20,612,000	20,234,000	19,371,000	18,164,000

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

Changes in deferred tax valuation allowances decreased income tax expense by \$21.8 million, \$8.1 million and \$9.3 million in 2006, 2005 and 2004, respectively.

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 specialty engineered materials used in a variety of electrical, electronic, thermal and structural applications. Our products are sold into numerous markets, including telecommunications and computer, data storage, aerospace and defense, automotive electronics, industrial components, appliance and medical.

After five straight years of growth, sales declined \$46.0 million from \$955.7 million in 2007 to \$909.7 million in 2008. Sales from the majority of our businesses were strong for the first three quarters of the year; demand from many of our key markets, including portions of the telecommunications and computer, industrial components, medical and defense markets, was solid. Media sales into the data storage market, however, declined significantly in 2008 due to a combination of factors. This fall-off, coupled with a slowdown across several of our large markets in the fourth quarter, largely due to the global economic crisis and its impact on consumer spending, resulted in sales being 5% lower in 2008 than in 2007.

We acquired the operating assets of Techni-Met, Inc. in the first quarter 2008. Techni-Met's complementary technology expanded our presence in the medical market and provides opportunities for growth in other markets. Techni-Met provided an immediate benefit to margins and profits in 2008.

The gross margin rate was 17% of sales in 2008, down from 21% in 2007. A large portion of this difference was due to a \$15.2 million inventory write-down as a result of the significant decline in ruthenium market prices in 2008. Increases in manufacturing overhead costs, the impact of metal prices and other factors combined to more than offset the margin benefits from improved pricing in portions of our businesses.

Operating profit was \$28.1 million in 2008, a decline of \$56.4 million from 2007. Profit in 2007 included several unusual items, including a net \$12.7 million benefit from ruthenium price and quality issues and an \$8.7 million litigation settlement gain. In addition to these items, profit declined in 2008 relative to 2007 due to the lower sales volumes, the inventory write-down and other factors.

Cash flow from operations was a solid \$76.8 million in 2008, an improvement of \$25.9 million over 2007. The strong cash flow allowed us to acquire Techni-Met and fund capital expenditures and stock repurchases while only increasing debt \$6.3 million.

RESULTS OF OPERATIONS

(Millions, except for share data)	2008	2007	2006
Net sales	\$909.7	\$955.7	\$763.1
Operating profit	28.1	84.5	43.8
Income before income taxes	26.1	82.7	39.7
Net income	18.4	53.3	49.6
Diluted earnings per share	0.89	2.59	2.45

Sales of \$909.7 million in 2008 were \$46.0 million, or 5%, lower than sales of \$955.7 million in 2007 while sales in 2007 were 25% higher than sales of \$763.1 million in 2006. International sales declined 23% in 2008 from 2007 after growing 57% in 2007 over 2006. Domestic sales improved 9% in 2008 and 2007 over the respective prior years.

Sales of targets manufactured from ruthenium and other materials for media applications in the data storage market declined \$141.9 million, or 93%, in 2008 from the high levels seen in 2007. This decline was due to quality issues, a material specification change, lower metal prices and softer market conditions, particularly late in the year. In addition, the sales value was reduced in 2008 as a result of a growing trend away from manufacturing targets with Company-supplied material to manufacturing targets with customer-supplied material on a toll basis. Media sales in 2007 were more than double the sales in 2006 and accounted for the majority of the growth in our total sales in that

year. This growth was fueled largely by our customers' conversion to the perpendicular magnetic recording technology used in the manufacture of hard disk drives.

Growth in other portions of our business, the acquisition of Techni-Met and higher metal prices offset a portion of the decline in media sales in 2008.

Sales to the telecommunications and computer market grew 19% in both 2008 and 2007 over the respective prior years. However, sales into this market slowed down in the fourth quarter 2008 as the global economic crisis reduced consumer spending levels. Sales for defense applications, which were solid throughout 2007, strengthened again in 2008. Sales into the medical market grew in 2008, in part due to the acquisition of Techni-Met. Demand from the oil and gas market improved during 2007 and for the first three quarters of 2008. During the fourth quarter 2008, demand softened due to a combination of the decline in oil prices and Hurricane Ike, which temporarily disrupted oil and gas operations in the southern U.S. Sales into the appliance market grew in each of the last two years. Automotive electronics sales declined for the second year in a row, although improved sales into the European automotive market in the first half of 2008 helped to offset a portion of the weakness in the domestic market.

The development of new products and applications into existing and/or emerging markets has provided a benefit to sales across each of our four reportable segments in the last two years. One of these emerging markets is solar energy. While our sales to this market were relatively small in 2008, solar energy applications offer numerous growth opportunities for our materials and technologies from each of our main businesses.

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 declined significantly in the fourth quarter 2008 but on average for the year were higher than in 2007. Prices for gold and the other precious metals we use were volatile in 2008 and on average were higher in 2008 than 2007. Ruthenium prices fell significantly during 2008 and on average were well below 2007. In aggregate, the average metal prices in 2007 were higher than they were in 2006. We estimate that the net metal price impact increased sales \$50.7 million in 2008 and \$36.8 million in 2007 relative to the respective prior year.

In the first quarter 2008, we reduced sales and accounts receivable by \$2.6 million in order to correct an error from 2007. The error was discovered late in the first quarter 2008 and resulted from inaccurate billings to one customer during the second half of 2007. We determined that the error was not material in accordance with SAB 99 and APB No. 28 and therefore the 2007 financial statements were not adjusted. Correction of the error also reduced the gross margin by \$2.6 million in the first quarter 2008.

Gross margin was \$152.1 million, or 17% of sales, in 2008, \$196.7 million, or 21% of sales, in 2007 and \$162.2 million, or 21% of sales, in 2006. Margins in 2008 and 2007 were affected by the following issues associated with the production and sale of ruthenium and related products:

- In 2008, the market price of ruthenium declined significantly, from \$415 per troy ounce at the beginning of the year to \$100 per troy ounce at the end of the year and fell below the carrying cost of our inventory. Accounting regulations require inventory to be carried at the lower of its cost or market value. As a result, we recorded lower of cost or market charges to write down the carrying value of our inventory \$15.2 million, reducing margins and profits in 2008.
- 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. We subsequently changed our pricing practices so that our purchase price for ruthenium forms the basis for the price charged to our customers. The price of ruthenium then declined during 2007 and dropped below our purchase price and the carrying value of the inventory. This resulted in lower of cost or market charges totaling \$4.5 million during 2007. Margins were also reduced \$5.7 million in 2007 as a result of quality returns from a key customer and related rework and scrap costs.

Margins, therefore, declined by a net \$27.9 million from 2007 to 2008 as a result of the above factors.

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.

Gross margin improved \$34.5 million in 2007 over 2006. The increased sales volume in 2007 generated an estimated \$23.7 million of additional margin; the incremental margin earned on the sales growth was less than the prior-year margin rate as the majority of the sales increase was in ruthenium products that had a very high metal content and cost. We made improvements to the pricing for our copper-based alloy products in the fourth quarter of 2006 that allowed for an increase in the percentage of copper-based sales subject to the copper cost pass-through. The full year benefit of that improved pricing in 2007, however, was more than offset by an unfavorable change in product mix, manufacturing inefficiencies and other factors. Gross margin in 2007 also benefited from the items associated with the production and sale of ruthenium products described above.

Selling, general and administrative expenses (SG&A) were \$104.8 million in 2008 (12% of sales), \$110.1 million in 2007 (12% of sales) and \$111.0 million in 2006 (15% of sales). Expenses declined 5% in 2008 from 2007 after declining 1% in 2007 from 2006.

The decreased expenses in 2008 as compared to 2007 resulted from lower incentive compensation expense offset in part by the addition of Techni-Met, higher retirement costs and other factors. The slight decline in expenses in 2007 resulted primarily from lower incentive compensation expense, retirement plan costs and corporate administrative expenses offset in part by higher selling and marketing costs, primarily overseas.

The incentive compensation expense on plans designed to pay in cash declined \$8.2 million in 2008 from 2007 and \$3.3 million in 2007 from the 2006 level. The changes in the annual expense were caused by the performance of the individual businesses relative to their plans' objectives. Stock-based compensation expense, including the expense for performance shares, stock options, stock appreciation rights and restricted stock, was \$2.6 million in 2008, \$3.9 million in 2007 and \$1.7 million in 2006. The decline in 2008 from 2007 was due to a lower expense for the performance shares as a result of our actual and projected performance.

Expenses for the U.S. defined benefit pension plan and certain other domestic retirement plans were \$0.4 million higher in 2008 than in 2007 and \$1.3 million lower in 2007 than in 2006. The major causes for the difference in expense between years included the plan valuation assumptions for each year, the actual performance of the plans and other factors. The majority of these retirement costs were charged to SG&A expense, although a portion of the cost was included in cost of sales and a much smaller portion in research and development expenses.

International SG&A expenses, excluding incentive compensation, increased \$0.6 million in 2008 over 2007, largely due to the translation effect of the weaker dollar, and grew \$2.9 million in 2007 over 2006 due to the expansion of our overseas operations and increased sales and marketing support efforts.

Domestic selling, marketing and distribution costs in 2008 were flat with 2007. These expenses increased in 2007 and 2006 in order to support the sales growth in those years. The increase in 2007 was offset in part by savings from the closure of the New Jersey service center late in 2006. One-time closure costs totaled \$1.1 million in 2006.

Corporate administrative expenses were up \$3.0 million in 2008 compared to 2007. The increase was largely due to higher legal, compliance and information technology costs. Total administrative expenses also increased in 2008 due to the acquisition of Techni-Met. Corporate administrative expenses declined \$0.7 million in 2007 from 2006.

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.

One of the insurers paid \$6.2 million, which represented their share of the settlement, directly to our attorneys prior to December 31, 2007 in partial settlement of our fees, reducing our receivable from the insurers and the payable to our attorneys by the same amount. The remaining \$11.3 million due to us was recorded in other receivables on the Consolidated Balance Sheet as of December 31, 2007 and was subsequently paid in full in the first quarter 2008.

Research and development expenses (R&D) were \$6.5 million in 2008, \$5.0 million in 2007 and \$4.2 million in 2006. R&D expenses were below 1% of sales in each of the last three years, although we did increase our R&D spending and activity levels in each of the last two years. In the fourth quarter 2006, we consolidated an R&D laboratory that was in the Cleveland, Ohio facility into the existing laboratory in Elmore, Ohio in order to improve efficiencies, response times and provide additional support to manufacturing operations. R&D efforts are focused on developing new products and applications as well as continuing improvements in our existing products.

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

(Millions)	Income/ (Expense)		
	2008	2007	2006
Foreign exchange gains (losses)	\$ (3.7)	\$(0.6)	\$ 1.4
Amortization of intangible assets	(3.5)	(1.2)	(1.0)
Metal consignment fees	(4.5)	(2.0)	(2.1)
Directors' deferred compensation	1.2	(0.3)	(1.3)
Derivative ineffectiveness	(0.2)	(0.1)	0.2
Loss on sale of business	—	(0.3)	—
Other items	(3.1)	(1.3)	(0.4)
Total	\$(13.8)	\$(5.8)	\$(3.2)

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 2008 over 2007 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 income or expense on the directors' deferred compensation plan is a function of the outstanding shares in the plan and movements in the market price of our stock. In 2008, the share price decreased, which reduced our liability and created income. In 2007 and 2006, the share price increased, which increased our liability to the plan and resulted in a higher expense. Derivative ineffectiveness represents changes in the fair value of a derivative financial instrument that does not qualify for the favorable hedge accounting treatment. This derivative instrument matured in the fourth quarter 2008.

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.

Operating profit of \$28.1 million 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 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.

The operating profit in 2007 was \$40.7 million higher than the operating profit of \$43.8 million in 2006. The aforementioned 2007 net ruthenium benefit and the litigation settlement gain accounted for \$21.4 million of the profit improvement in 2007 over 2006, while all other factors improved operating profit a combined \$19.3 million, or 47%, over 2006.

Operating profit was 3% of sales in 2008, 9% of sales in 2007 and 6% of sales in 2006.

Interest expense was \$2.0 million in 2008, \$1.8 million in 2007 and \$4.1 million in 2006. 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 reduced expense in 2007 as compared to 2006 resulted primarily from lower outstanding debt levels in 2007.

Income before income taxes was \$26.1 million in 2008 compared to \$82.7 million in 2007. Income before income taxes in 2007 was more than twice the income before income taxes of \$39.7 million generated in 2006.

The income tax expense (benefit) for 2008, 2007 and 2006, including the movement in the deferred tax valuation allowance, is summarized as follows:

(Millions)	2008	2007	2006
Tax expense prior to valuation allowance	\$ 7.5	\$ 28.5	\$ 11.9
Deferred tax valuation allowance (benefit)	0.2	0.9	(21.8)
Total tax expense (benefit)	\$ 7.7	\$ 29.4	\$ (9.9)

In calculating the tax expense prior to movements in the valuation allowance, the effects of percentage depletion, executive compensation and foreign source income and deductions were major causes of the differences between the effective and statutory rates for all three years. The production deduction was also a major cause for the difference between the effective and statutory rates in 2008 and 2007. In 2008, the effective rate was lowered as a result of a reduction in the tax reserves in accordance with Financial Interpretation No. 48. See Note P to the Consolidated Financial Statements for a reconciliation of the statutory and effective tax rates.

In 2006, we reversed \$21.8 million to income, which represented substantially all of the domestic and the majority of the foreign deferred tax valuation allowance remaining on the balance sheet that was originally recorded in 2002 in accordance with Statement No. 109, "Accounting for Income Taxes". The valuation allowance was initially recorded because we determined that the deferred tax assets were impaired due to cumulative operating losses at that time. The valuation allowance was adjusted up and down in subsequent years depending upon utilization of the assets and other factors. In the fourth quarter 2006, as a result of improved actual and projected earnings, we demonstrated that it was more likely than not that we could utilize our deferred tax assets and the valuation allowance was reversed accordingly. An immaterial valuation allowance associated with our subsidiary in the United Kingdom was not reversed and remained on the balance sheet.

In 2008 and 2007, we recorded deferred tax assets associated with certain state tax carryforwards as a reduction to the tax expense. However, the benefit in each year was offset by the recording of valuation allowances due to the uncertainty of realizing these assets.

The valuation allowance did not affect any tax payments or refunds in the three years presented.

Net income was \$18.4 million, or \$0.89 per share diluted, in 2008, \$53.3 million, or \$2.59 per share diluted, in 2007 and \$49.6 million, or \$2.45 per share diluted, in 2006.

Net income and earnings per share did not grow proportionately with income before income taxes in 2007 as compared to 2006 due to the favorable reversal of the \$21.8 million valuation allowance in 2006.

Segment Disclosures

The Company has four reportable segments. Williams Advanced Materials Inc. (WAM) and its subsidiaries are reported as Advanced Material Technologies and Services. Alloy Products, including Brush Resources Inc., is reported as Specialty Engineered Alloys. Beryllium Products is known as Beryllium and Beryllium Composites while Technical Materials, Inc. (TMI) is reported as Engineered Material Systems. 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, and Zentrix Technologies Inc., a wholly owned subsidiary that manufactures electronic packages and other products. The All Other column shows an operating loss of \$2.4 million in 2008 compared to an operating profit of \$5.0 million in 2007. The change between years is 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)	2008	2007	2006
Net sales	\$466.4	\$519.9	\$343.4
Operating profit	10.3	59.4	30.5

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 and performance coatings. Major markets for these products include data storage, medical and the wireless, semiconductor, photonic and hybrid sectors of the microelectronics market. 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 and California and international facilities in Asia and Europe.

Sales from Advanced Material Technologies and Services were \$466.4 million in 2008, a decline of 10% from 2007, while sales of \$519.9 million in 2007 were \$176.5 million, or 51%, higher than sales of \$343.4 million in 2006.

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. The net increase in metal prices increased sales by an estimated \$45.8 million in 2008 compared to 2007. The higher metal price pass-through offset a portion of the decline in sales due to lower underlying volumes. In 2007, metal prices on average were higher than in 2006, accounting for an estimated \$29.7 million of the sales increase in that year compared to 2006.

The majority of the decline in sales in 2008 as well as the growth in sales in 2007 was due to ruthenium products manufactured by the Brewster, New York facility for media applications within the data storage market. Our product development efforts in recent years allowed us to capture a share of this growing market, particularly as customers were converting over to the perpendicular magnetic recording technology in late 2006 and the first half of 2007. 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 for media applications in 2008 were \$141.9 million lower than in 2007. The total volume shipped, in terms of troy ounces, decreased 70% in 2008 from 2007, and was less than the decrease in the sales value. In addition to the lower volumes shipped, the sales value of shipments was also reduced in 2008 as a result of a shift in the material supply arrangements. In 2007, the majority of our media sales were manufactured from material we

purchased. In 2008, due to our customers' high ruthenium inventory positions, the majority of these sales in 2008 were manufactured from customer-supplied metal on a toll basis, which reduced the quantity of metal invoiced to customers. We estimate that this trend toward using customer-supplied material accounted for \$26.4 million of the reduction in media sales in 2008.

While media market sales declined in 2008, sales from other portions of this segment's business were solid. Sales of vapor deposition targets, wire and other products into the wireless and photonic sectors of the microelectronics market improved significantly in 2008 and 2007 over the respective prior years; however, demand softened in the fourth quarter 2008 as key customers pushed orders out until 2009 in response to the slowdown in consumer spending.

Sales of lids from Thin Film Technology, Inc. (TFT), a wholly owned subsidiary, grew significantly in both 2008 and 2007; sales in 2008 were double the sales from 2006. This growth was fueled by strong demand from the defense and medical markets. Sales of inorganic chemicals and other materials from CERAC, incorporated (CERAC), a wholly owned subsidiary, had double-digit growth rates in each of the last two years. These materials are used in optics, solar energy and other applications.

The acquisition of Techni-Met added to the segment's sales in 2008. Techni-Met manufactures precision precious metal coated flexible polymer films used primarily for medical applications. Prior to the acquisition, Techni-Met was a customer of ours, as they sourced the majority of their precious metal requirements from our Buffalo, New York operations. The acquisition allowed us to capture the value added generated by their operation. In addition, their technology provides potential long-term growth opportunities in various markets.

Advanced Material Technologies and Services generated gross margins of \$58.0 million (12% of sales) in 2008, \$100.7 million (19% of sales) in 2007 and \$65.8 million (19% of sales) in 2006.

The \$42.7 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.

Gross margin grew \$34.9 million in 2007 over 2006. In addition to the net \$12.7 million ruthenium benefits, margins improved \$22.2 million in 2007 over 2006 due to the benefits of the higher sales volumes and a slight favorable change in the product mix partially offset by a \$2.9 million increase in manufacturing overhead.

SG&A, R&D and other-net expenses from Advanced Material Technologies and Services were \$47.7 million (10% of sales) in 2008, \$41.3 million (8% of sales) in 2007 and \$35.3 million (10% of sales) in 2006.

SG&A and R&D expenses incurred by Techni-Met totaled \$2.1 million in 2008. International expenses grew \$0.5 million in 2008 and \$1.7 million in 2007 over the respective prior years as a result of increased activity and the creation of new overseas entities. Incentive compensation expense declined \$1.5 million in 2008 due to the lower profitability while the incentive expense was \$0.8 million higher in 2007 than in 2006. R&D costs increased in each of the last two years in order to support the current business and future growth. Domestic administrative costs have increased in each of the last two years in order to support the larger organization while corporate charges were higher in each year as well.

Amortization of intangible assets increased \$2.4 million in 2008 over 2007 primarily as a result of the Techni-Met acquisition. Amortization was \$0.1 million higher in 2007 than in 2006. 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. Metal financing fees in 2007 were unchanged from 2006.

Operating profit from Advanced Material Technologies and Services was \$10.3 million, a decline of \$49.1 million from the profit of \$59.4 million in 2007. The lower profit resulted primarily from the fall-off in

media market sales and the related ruthenium inventory issues. Operating profit in 2007 was \$28.9 million higher than the profit of \$30.5 million in 2006. Operating profit was 2% of sales in 2008, 11% in 2007 and 9% in 2006.

Specialty Engineered Alloys

(Millions)	2008	2007	2006
Net sales	\$299.9	\$290.0	\$275.6
Operating profit	5.8	7.6	7.9

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 plastic mold tooling, oil and gas drilling components, bearings, bushings, welding rods, 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 3% 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 \$299.9 million were \$9.9 million, or 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 in 2007 grew \$14.4 million, or 5%, over sales of \$275.6 million in 2006. The increase in sales in 2007 was largely due to an increase in the portion of sales subject to a metal price pass through and higher metal prices. Sales of bulk products increased in 2008 and 2007 while strip product sales declined in both 2008 and 2007 over the respective prior years.

Sales of bulk products to the industrial components market have increased in each of the last two years. This growth was due in part to higher shipments for oil and gas applications which were partially driven by higher energy prices. Demand from the oil and gas market slowed down in the fourth quarter 2008 as previously noted. The continued development of applications utilizing non-beryllium-containing alloys in the heavy equipment sector have contributed to the growth in shipments in 2008 and 2007 as well. Sales of materials for undersea telecommunications applications increased in 2008 as did sales for aerospace and defense applications.

Demand from the telecommunications and computer market for strip products, particularly for hand set applications, softened in 2007 and remained soft throughout 2008. Demand from the automotive market weakened approximately 10% in 2008 as compared to 2007 after being relatively flat in 2007 as compared to 2006. Sales into the appliance market, which is a smaller market for strip products, grew 6% in 2008 after growing 5% in 2007 over 2006.

Although total sales were higher in each of the last two years, volumes (i.e., pounds shipped) declined in both 2008 and 2007 from the respective prior year. Strip product shipment volumes declined 13% in 2008 from the 2007 level after declining 11% in 2007 from 2006. Shipments of both the higher beryllium-containing and lower-beryllium-containing strip products were down in each of the last two years while volumes of thin diameter rod and wire products increased modestly in each of the last two years. Bulk product shipment volumes improved 6% in 2008 over 2007 after growing 3% in 2007 over 2006.

Sales of new products contributed to the growth in Specialty Engineered Alloy sales in each of the last two years, including products for undersea telecommunications and homeland security.

The gross margin on sales by Specialty Engineered Alloys totaled \$59.6 million in 2008, an improvement of \$1.4 million over the gross margin of \$58.2 million in 2007. The gross margin was 20% of sales in both years. In 2006, the gross margin was \$65.9 million and 24% of sales.

The margin growth in 2008 was due to the benefits of the 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. The reduced gross margin in 2007 was caused partially by the lower sales volumes, an unfavorable change in the product mix and yield and performance and other manufacturing issues at the Elmore facility. These factors more than offset the benefits from the increased metal price pass-through as compared to 2006.

We increased the percentage of sales subject to the pass-through of changes in copper prices in the second half of 2006. The cost is passed on to customers based upon the cost at the time of receipt of the order. Over time, our selling price and purchase price are in balance, but timing differences between the receipt and actual fulfillment of the order can impact margins in a given period, especially when there is a significant movement in the market price of copper.

Total SG&A, R&D and net-other expenses grew \$3.1 million from \$50.7 million in 2007 to \$53.8 million in 2008. Expenses were 18% of sales in 2008 and 17% of sales in 2007. In 2006, expenses totaled \$57.9 million, or 21% of sales. The 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.

The \$7.2 million decline in expenses in 2007 was due to a combination of lower incentive compensation and corporate charges and foreign currency losses. One-time costs associated with the closure of the New Jersey service center added \$1.1 million to SG&A expenses in 2006.

Operating profit from Specialty Engineered Alloys declined \$1.8 million from \$7.6 million in 2007 to \$5.8 million in 2008 as the increase in expenses more than offset the growth in gross margins. Operating profit was \$7.9 million in 2006.

Beryllium and Beryllium Composites

(Millions)	<u>2008</u>	<u>2007</u>	<u>2006</u>
Net sales	\$63.6	\$60.5	\$57.6
Operating profit	8.4	7.8	7.4

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, general industrial markets and automotive.

Sales from Beryllium and Beryllium Composites during 2007 and 2006 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. A summary of the segment sales for these two projects, which were complete as of year-end 2007, and all other customers is as follows:

(Millions)	2008	2007	2006
JWST	\$ —	\$ 0.8	\$ 2.8
JET	—	2.3	5.9
All other	63.6	57.4	48.9
Total net sales	\$63.6	\$60.5	\$57.6

While total Beryllium and Beryllium Composites sales increased 5% in both 2008 and 2007, sales to all customers excluding the JWST and JET grew 11% in 2008 and 17% in 2007 over the respective prior years. This growth was largely due to increased demand from the defense market. Sales for defense platforms, mainly aerospace and missile systems, improved in the last three quarters of 2008 after a sluggish first quarter. Defense sales were strong throughout 2007 and the second half of 2006 after a weak first half of 2006. Sales for medical and industrial x-ray applications were down slightly in 2008 after increasing in 2007 over 2006. Sales for acoustic applications grew slightly in 2008 and this market represents a long-term growth opportunity for beryllium products. Sales of new products, including applications using near net shape technologies, also contributed to the sales growth in 2008 and 2007. Sales of ceramics improved 3% in 2008 over 2007 after declining 12% in 2007 from 2006.

Beryllium and Beryllium Composites generated a gross margin of \$19.6 million (31% of sales) in 2008, \$20.1 million (33% of sales) in 2007 and \$18.7 million (32% of sales) in 2006. The decline in margins in 2008 as compared to 2007 resulted from an unfavorable product mix shift, due to 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. The margin growth in 2007 over 2006 was due to the incremental margin generated by the higher sales volumes partially offset by an unfavorable change in the product mix.

SG&A, R&D and other-net expenses were \$11.2 million (18% of sales) in 2008, \$12.2 million (20% of sales) in 2007 and \$11.3 million (20% of sales) in 2006. The 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. The growth in SG&A expenses in 2007 was partially due to additional costs to support the sales growth. Expenses also increased in 2007 and 2006 due to implementing a program to invest in people and processes that is designed to improve the timing, coordination and efficiency of the entire order fulfillment process, from application design to order placement to shipment and billing.

Operating profit from Beryllium and Beryllium Composites of \$8.4 million 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. The profit in 2007 was \$0.4 million higher than the 2006 operating profit. Operating profit was 13% of sales in each year presented.

Engineered Material Systems

(Millions)	2008	2007	2006
Net sales	\$65.9	\$70.9	\$68.7
Operating profit	5.9	4.7	2.7

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. The largest markets for Engineered Material Systems are automotive electronics, telecommunications and computer

electronics 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.

Engineered Material Systems' sales of \$65.9 million in 2008 declined 7% from sales of \$70.9 million in 2007. Sales in 2007 improved 3% over sales in 2006. The lower sales in 2008 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 the year. The automotive electronics market was weaker in 2007 than in 2006 as well.

Sales of materials for disk drive applications, which were strong during the first three quarters of 2008, softened in the fourth quarter 2008 and were essentially unchanged for the full year 2008 compared to 2007. Sales of this new product in 2007 were more than double the sales in 2006 and were the main contributor to the sales growth for this segment in 2007. Sales of other new products, including fuses and switches, and sales for new applications in the energy and medical markets also grew in each of the last two years over the respective prior periods.

Engineered Material Systems generated a gross margin on sales of \$13.5 million in 2008 compared to \$13.0 million in 2007 and \$11.3 million in 2006. As a percent of sales, gross margin improved to 21% of sales in 2008 from 18% in 2007 and 17% in 2006. 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 recent capital investments. The higher sales and a favorable change in the product mix in 2007 contributed to the margin growth in that year as well.

SG&A, R&D and other-net expenses from Engineered Material Systems declined \$0.7 million in 2008 from 2007 after declining \$0.3 million in 2007 from 2006. The decline in expenses in 2008 was due to lower incentive compensation expense and corporate charges. Legal and administrative costs were lower in 2007 than in 2006. In 2006, these costs were higher due to efforts to develop a joint venture in China; we decided not to pursue this effort any further early in the first quarter 2007. Incentive compensation costs were higher in 2007 than 2006, but this increase was largely offset by lower corporate charges.

Operating profit generated by Engineered Material Systems improved to \$5.9 million (9% of sales) in 2008 from \$4.7 million (7% of sales) in 2007. Operating profit in 2007 was a \$2.0 million improvement over the profit of \$2.7 million (4% of sales) earned in 2006.

International Sales and Operations

We operate in worldwide markets and our international customer base continues to expand 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 and Ireland and recently constructed facilities in China and the Czech Republic. These facilities provide a combination of light manufacturing, finishing operations and distribution services.

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

We also have branch sales offices and other operations in various countries, including the Republic of China, Korea and Taiwan, and we utilize an established network of independent distributors and agents throughout the world.

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Total international sales, including sales from international operations as well as direct exports from the U.S., were as follows:

(Millions)	2008	2007	2006
From international operations	\$217.1	\$241.4	\$178.3
Exports from U.S. operations	102.1	171.6	85.1
Total international sales	\$319.2	\$413.0	\$263.4
Percent of total net sales	35%	43%	35%

The international sales presented in the above table are included in individual segment sales figures previously discussed. The majority of international sales are to the Pacific Rim, Europe and Canada.

After growing 73% in 2007 over 2006, Asian sales declined 34% in 2008 from 2007. Both the decline in 2008 and the growth in 2007 were primarily due to ruthenium product sales to the media market. International sales outside of Asia grew slightly in 2008 and 2007 over the respective prior periods.

Telecommunications and computer, data storage and automotive electronics are the largest international markets for our products. The appliance market for Specialty Engineered Alloys is a more significant market, primarily in Europe, than it is domestically while government and defense applications are not as prevalent overseas as they are in the U.S. 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. In 2008, the dollar's value fluctuated significantly against the currencies in which we sell, but on average, it was weaker than in 2007; the dollar was also weaker on average in 2007 than it was in 2006. The favorable effect on the translation of foreign currency sales was \$8.0 million in 2008 as compared to 2007 and \$4.1 million in 2007 as compared to 2006.

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.

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,		
	2008	2007	2006
Total cases pending	9	9	13
Total plaintiffs (including spouses)	36	31	54
Number of claims (plaintiffs) filed during period ended	1(6)	0(0)	2(3)
Number of claims (plaintiffs) settled during period ended	0(0)	1(1)	1(2)
Aggregate cost of settlements during period ended (dollars in thousands)	\$ —	\$ 100	\$ 20
Number of claims (plaintiffs) otherwise dismissed	1(1)	3(22)	1(1)

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, 2008, two purported class actions were pending.

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

(Millions)	December 31,	
	2008	2007
Asset (liability)		
Reserve for litigation	\$(2.0)	\$(1.3)
Insurance recoverable	1.7	1.0

The reserve and the recoverable changed by equal amounts in 2008 due to changes in the outstanding cases. There were no settlement payments made by our insurers or us during 2008 for beryllium litigation.

Regulatory Matters. 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.

FINANCIAL POSITION

Working Capital

Net cash from operations was \$76.8 million in 2008, an improvement of \$25.9 million over the cash flow from operations of \$50.9 million in 2007. Cash flow from operations was \$38.8 million in 2006. In each of the last three years, cash flow from operations was stronger in the second half of the year than it was in the first half. Cash flow from operations in the second half of 2008 was \$70.7 million, or 92% of the total for the year. Cash flow from operations in 2008 improved over 2007 despite the decline in net income 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.

Cash balances totaled \$18.5 million at year-end 2008 compared to \$31.7 million at year-end 2007. A portion of the cash on hand, increased borrowings and the cash flow from operations were used to fund the acquisition of Techni-Met, capital expenditures and the repurchase of shares during 2008. Cash increased \$16.1 million in 2007 as the cash flow from operations coupled with the proceeds from the exercise of stock options were more than enough to fund capital expenditures and reduce debt in that year.

Accounts receivable of \$89.8 million at December 31, 2008 was \$7.6 million, or 8%, below the receivable balance of \$97.4 million at year-end 2007. The decreased balance in 2008 was mainly due to the lower sales volume in the fourth quarter. However, receivables did not decline proportionately with the change in sales as the days sales outstanding (DSO), a measure of the average time period to collect receivables, slowed down approximately five days as of the end of the 2008 from the end of 2007. The increased DSO in 2008 was still within the normal historical range of our collection period.

Accounts written off to bad debt expense increased in 2008 over the prior year but write-offs remained relatively minor. The increase was largely due to the bankruptcy filing of one customer who purchased scrap from one of our operations. We closely monitor our accounts receivable aging and revise the credit terms offered to our customers as conditions warrant in order to minimize our exposure.

Accounts receivable grew \$10.9 million, or 13%, in 2007 as a result of higher sales volumes as the DSO improved approximately one day in 2007 over year-end 2006.

Inventories totaled \$156.7 million as of year-end 2008, a decrease of \$8.5 million, or 5%, from the balance of \$165.2 million as of year-end 2007. Inventory turns, a measure of how efficiently inventory is utilized, slowed down approximately 10% at year-end 2008 from year-end 2007. We reduced inventories approximately 11% in the fourth quarter 2008 from the levels at the end of the third quarter 2008 as a result of the slowdown in business.

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.

The inventory balance at year-end 2007 was 9% higher than inventories at the prior year-end. Despite the growth in the inventory balance, inventory turns improved in 2007. The majority of the increase in inventories in 2007 was in Advanced Material Technologies and Services. This segment maintains the majority of its precious metals on off-balance sheet arrangements. However, a significant portion of its sales growth in 2007 was in products that use other metals that are owned and not held on consignment, including ruthenium.

The decline in the cost of copper, nickel and various precious metals reduced the value of inventory on a first-out (FIFO) basis in 2008 while the higher cost of gold increased the value of inventory on a FIFO basis. In 2007, the inventory value of these metals increased on a FIFO basis due to higher metal prices. 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.

Prepaid expenses, including insurance, income taxes, property taxes, rent, manufacturing supplies and other items, totaled \$23.7 million as of year-end 2008, an increase of \$6.0 million over the balance of \$17.7 million as of year-end 2007. The increase was primarily due to income taxes. Prepaid income taxes, which represent overpayments of taxes to be refunded or applied to the 2009 liability, totaled \$4.5 million at December 31, 2008; there was no prepaid income tax balance at December 31, 2007 as we were in a tax liability position and did not have an overpayment. Prepaid expenses also grew in 2008 due to changes in the fair value of euro and sterling derivative contracts. Prepaid expenses increased \$3.7 million in 2007 over the balance at the prior year end.

Other assets were \$34.4 million at year-end 2008, an increase of \$22.6 million over the balance of \$11.8 million at year-end 2007. This increase was 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. Other assets declined \$1.8 million in 2007 primarily as a result of the amortization of intangible assets. The insurance recoverable account was also reduced as a result of the legal settlement in the fourth quarter and other changes to the individual outstanding cases during the year.

Accounts payable of \$28.0 million as of December 31, 2008 was \$0.9 million higher than the prior year-end balance of \$27.1 million while the 2007 balance was \$3.6 million lower than 2006 year-end. The change in balances between years was primarily due to the timing of payments.

Accrued salaries and wages declined \$11.6 million in 2008 from 2007 after growing \$2.1 million in 2007 over the 2006 year-end level. 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 \$0.1 million as of December 31, 2008 and \$2.6 million as of December 31, 2007.

Other long-term liabilities were \$19.4 million as of year-end 2008 compared to \$11.6 million at year-end 2007. Long-term unearned income increased \$8.0 million in 2008 and \$3.5 million in 2007 for reimbursements under a government funded capital expenditure program. See Critical Accounting Policies. Other increases in 2008, including an increase to the legal reserve and rent accruals, were offset by a reduction to the long-term portion of the incentive compensation accrual.

Total other long-term liabilities were unchanged in 2007 from the year-end 2006 balance. The increase in unearned income in 2007 was offset by reductions in the long-term incentive compensation accrual, due to a portion of the accrual becoming a current liability, and the legal reserve. The legal reserve declined in 2007 as a result of cases being dismissed and the payment of \$0.1 million for settlements.

Depreciation and Amortization

Depreciation, amortization and depletion was \$33.8 million in 2008, \$23.9 million in 2007 and \$24.6 million in 2006. The increase in expense in 2008 was due in part to additional mine activity at our Utah operations and the acquisition of intangible assets as part of the Techni-Met purchase.

Capital Expenditures

Capital expenditures for property, plant and equipment and mine development totaled \$35.9 million in 2008, \$33.6 million in 2007 and \$15.5 million in 2006. Capital spending has exceeded the level of depreciation in each of the last two years as we increased the level of capital investment in order to expand our operations, improve efficiencies, implement new technologies and upgrade or replace older equipment.

Capital spending by Advanced Material Technologies and Services totaled \$7.8 million in 2008 and \$10.3 million in 2007. We expanded the Brewster facility to accommodate the potential growth in the production of targets during this time period. We also constructed a new facility in China during 2008 and 2007 while the Wheatfield, New York facility was expanded in order to accommodate the addition of shield kit cleaning equipment in 2007. Spending in both years also included the implementation of a new software system.

Specialty Engineered Alloys capital spending was \$9.1 million in 2008 and \$12.5 million in 2007. Included in these totals are mine development costs of \$0.4 million in 2008 and \$7.1 million in 2007 as we completed and opened a new pit for mining bertrandite ore in Utah during 2008. Various discrete pieces of equipment at the Ohio and Pennsylvania facilities were upgraded or replaced in each of the last two years.

Spending within Engineered Material Systems totaled \$1.1 million in 2008 and \$3.0 million in 2007. The installation of a new efficient high technology work center at the Lincoln facility, which began in 2007, was completed in 2008.

Capital spending in 2008 included \$11.8 million for the design and development of the new facility for the production of primary beryllium under a Title III contract with the U.S. Department of Defense (DOD). The total cost of the project is estimated to be approximately \$90.4 million; we will contribute land, buildings, research and

development, technology and ongoing operations valued at approximately \$23.3 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 fourth quarter 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.

Approximately 56% of the capital spending in 2008 was for expansion purposes. Included in this figure is the spending on the new primary beryllium facility that is being reimbursed by the DOD. Spending on new technology projects accounted for an estimated 18% while maintenance capital totaled an estimated 26% of the total spending.

In addition to the above capital expenditure totals, we acquired the operating assets of Techni-Met for \$87.5 million in the first quarter 2008. We received \$1.4 million from escrow in the first quarter 2009 as the final purchase adjustment under the terms of the agreement; the \$1.4 million was recorded in other receivables on the December 31, 2008 Consolidated Balance Sheet. Subsequent to the acquisition, we sold the precious metal portion of Techni-Met's inventory for its fair value of \$22.9 million to a financial institution and consigned it back under our existing consignment lines. Goodwill assigned to the transaction totaled \$13.9 million.

We acquired the stock of CERAC in the first quarter 2006 for \$25.7 million, net of cash received. Goodwill assigned to the CERAC acquisition totaled \$8.7 million.

Retirement and Post-employment Benefits

The liability for retirement and post-employment benefits increased from \$57.5 million at December 31, 2007 to \$97.2 million at December 31, 2008 largely due to a change in the valuation of the domestic defined benefit pension plan.

The projected benefit obligation for this plan, which covers the majority of our domestic employees, was \$137.5 million as of year-end 2008 compared to \$124.2 million at year-end 2007. The market value of the plan assets was \$78.8 million as of year-end 2008, a decline of \$28.3 million from year-end 2007 due to actual investment losses of \$26.6 million and benefit and expense payments totaling \$6.0 million offset in part by Company contributions of \$4.3 million.

The liability for the domestic defined benefit pension recognized on the Consolidated Balance Sheets was \$58.7 million as of December 31, 2008 and \$17.0 million as of December 31, 2007. In the fourth quarter 2008, we increased the pension liability and recorded a \$41.5 million pre-tax charge to other comprehensive income (OCI), a component of shareholders' equity, primarily as a result of the plan performance in 2008 as well as a change in the discount rate.

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.

A portion of our retirees and current employees are eligible to participate in a retiree medical benefit plan. The liability for this plan, which is unfunded, was \$32.8 million at December 31, 2008 and \$34.2 million at December 31, 2007. The plan expense was \$2.4 million in 2008 and \$2.2 million in 2007.

Debt

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, which consisted of a gold-denominated loan and foreign currency denominated loans, increased \$5.7 million during 2008. Long-term debt increased \$0.6 million during 2008 and stood at \$11.2 million as of year-end 2008. Mandatory long-term debt repayments in 2009 total

\$0.6 million. 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.

We negotiated a new \$240.0 million revolving credit agreement in the fourth quarter 2007. This committed facility matures in the fourth quarter 2012 and is comprised of sub-facilities for revolving loans, swing line loans, letters of credit and foreign currency denominated borrowings. We were in compliance with all of our debt covenants as of December 31, 2008.

Outstanding debt totaled \$35.5 million as of December 31, 2007, a decrease of \$13.5 million from the \$49.0 million balance at the prior year-end. Short-term debt of \$24.9 million declined \$3.2 million during 2007 while long-term debt of \$10.6 million declined \$10.3 million during 2007 as a result of the pay down of borrowings under the revolving credit agreement and the pay-off of the \$0.8 million Utah variable rate promissory note.

Shareholders' Equity

Shareholders' equity totaled \$347.1 million as of year end 2008, a decrease of \$6.6 million from the balance of \$353.7 million at year end 2007. Equity increased \$62.7 million during 2007. Comprehensive income (loss), which includes net income, changes in derivative fair values and the pension liability that are charged directly to equity and other factors, was a main cause for the change in equity in both years. Comprehensive income (loss) was \$(4.9) million in 2008 and \$52.0 million in 2007. See Note L to the Consolidated Financial Statements.

We received \$0.2 million of cash for the exercise of approximately 12,000 options in 2008. We received \$5.0 million for the exercise of approximately 296,000 stock options in 2007. The decline in the number of options exercised in 2008 as compared to 2007 was primarily due to the lower share price on average throughout 2008.

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. As of year-end 2008, we had repurchased 300,000 shares at a cost of \$5.0 million under this plan.

We adopted FASB Interpretation No. 48, "Accounting for Uncertainties in Income Taxes, an interpretation of FASB Statement No. 109" (FIN 48) as of January 1, 2007. FIN 48 provides guidance on the financial statement recognition, measurement, treatment and disclosure of a tax position taken or expected to be taken on a tax return as well as the associated interest and penalties. As a result of adopting FIN 48, we increased our accrued income tax payable by \$1.4 million with the offset recorded as a charge against retained earnings as of January 1, 2007. Prior-year results were not restated for the adoption of FIN 48.

Equity was also affected by stock-based compensation expense, the tax benefits on the exercise of options and other factors in both 2008 and 2007.

Off-balance Sheet Obligations

We maintain the majority of our precious metal inventories on a consignment basis in order to reduce our exposure to metal price movements and to reduce our working capital investment. See Quantitative and Qualitative Disclosures About Market Risk. The notional value of the off-balance sheet inventory was \$104.2 million at December 31, 2008 compared to \$71.2 million at December 31, 2007. This increase in value was due to an increase in the quantity on hand, largely as a result of the Techni-Met acquisition, and higher gold prices offset in part by lower prices for platinum, palladium and silver. The unused and available capacity under the consignment lines totaled approximately \$70.3 million as of year-end 2008.

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)	2009	2010	2011	2012	2013	There- after	Total
Long-term debt	\$ 0.6	\$ —	\$ —	\$2.3	\$ —	\$ 8.3	\$11.2
Non-cancelable lease payments	7.1	6.6	6.0	3.2	2.9	26.5	52.3
Pension plan contributions	18.3	—	—	—	—	—	18.3
Purchase commitments	1.4	—	—	—	—	—	1.4
Total	\$27.4	\$6.6	\$6.0	\$5.5	\$2.9	\$34.8	\$83.2

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. Outstanding borrowings under the revolving credit agreement totaled \$2.3 million as of December 31, 2008. 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, 2008. See Note G to the Consolidated Financial Statements for further leasing details.

The pension plan contribution of \$18.3 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 2009 contribution as of early in 2009.

The purchase commitments of \$1.4 million are for capital equipment to be acquired in 2009.

Other

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.

Cash flow from operations has grown in each of the last three years over the respective prior year, aggregating \$166.5 million and more than doubling the total capital expenditures and mine development costs in that same period.

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,		
	2008	2007	2006
Total outstanding debt	\$ 41.8	\$ 35.5	\$ 49.0
Cash	18.5	31.7	15.6
Debt net of cash	\$ 23.3	\$ 3.8	\$ 33.4
Available borrowing capacity	218.2	217.0	84.8

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.

As the chart indicates, debt net of cash declined \$10.1 million from the end of 2006 to the end of 2008. The reduction in debt net of cash resulted from the cash from operations and, to a lesser extent, cash received from the exercise of stock options. During this time period, we acquired Techni-Met for a net outlay of \$63.1 million (the purchase price less the cash received for the sale of their gold against the consignment line).

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. The borrowing capacity was higher in 2008 and 2007 than in 2006 largely because of the improved terms provided by the credit agreement signed in the fourth quarter 2007.

The current revolving credit agreement provides more flexible covenants and terms than the prior agreement. The most restrictive covenant is a fixed charge coverage ratio. The agreement also limits the borrowings to a multiple of earnings before interest, taxes, depreciation and amortization and other adjustments.

The debt-to-total-debt-plus-equity ratio, a measure of balance sheet leverage, increased to 11% as of December 31, 2008 from 9% as of December 31, 2007. The ratio had improved in each of the previous two years. This level of leverage is still below the long-term average for the Company.

The working capital ratio, which compares current assets excluding cash to current liabilities excluding debt, improved each of the last two years, growing from 3.0 to 1.0 as of year-end 2006 to 3.4 to 1.0 as of year-end 2007 to 3.8 to 1.0 as of year-end 2008.

Portions of the cash balances may be invested in high quality, highly liquid investments with maturities of three months or less.

ENVIRONMENTAL

We have an active program of environmental compliance. We estimate the probable cost of identified environmental remediation projects and establish reserves accordingly. The environmental remediation reserve balance was \$6.3 million at December 31, 2008 and \$5.2 million at December 31, 2007. The main cause for the increase in the accrual in 2008 was for clean-up costs for the Company's former headquarter building that previously was also used to house light manufacturing operations and R&D laboratories. There were no new significant remediation projects identified during 2007. Payments against the reserve totaled \$0.3 million in 2008 and \$0.1 million in 2007. 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. 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. Approximately 87% of 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 Brush Resources' Utah extraction 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 approximately one hundred years. Ore reserves classified as possible are excluded from the following table.

	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>
Proven bertrandite ore reserves at year-end (thousands of dry tons)	6,454	6,531	6,550	6,601	6,640
Grade % beryllium	0.266%	0.266%	0.267%	0.268%	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)	64	52	48	38	39
Grade % beryllium, diluted	0.321%	0.321%	0.352%	0.316%	0.248%

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 Statement No. 5, "Accounting for Contingencies". Litigation and environmental accruals are only established 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.

The enhanced insurance coverage included in the litigation settlement with our insurers in the fourth quarter 2007 provides for coverage of non-employee claims for beryllium disease made prior to year-end 2007 where any portion of the alleged exposure period is prior to year-end 2007. This occurrence-based coverage insures claims from various prior years where we previously had little or sometimes no coverage. The insurance covers defense costs and indemnity payments and is subject to a \$1.0 million annual deductible. In 2008, defense costs exceeded the \$1.0 million deductible by an immaterial amount.

Pensions. We have a defined benefit pension plan that covers a large portion of our current and former domestic employees. We account for this plan in accordance with Statement No. 158. Under this statement, the carrying values of the associated 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 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 6.15% as of December 31, 2008 compared to a rate of 6.50% as of December 31, 2007.

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, 2008, unchanged from December 31, 2007. While the pension plan investments generated a loss in 2008, 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.

The investment loss on the defined benefit plan in 2008 was caused by the global economic crisis and the resulting severe decline in the stock market. In accordance with accounting guidelines, this loss was deferred and will be amortized to expense over a number of years. As of early in the first quarter 2009, we estimate that the amortization of this deferred loss along with other net valuation gains and losses, the change in the discount rate, the lower asset value and other factors should result in a \$0.5 million increase in the expense for this plan in 2009 over 2008.

If the expected rate of return assumption was changed by 25 basis points (0.25%) and all other pension assumptions remained constant, the 2009 projected pension expense would change by approximately \$0.3 million. If the December 31, 2008 discount rate were reduced by 25 basis points and all other pension assumptions remained constant, then the 2009 projected pension expense would increase by approximately \$0.5 million.

Cash contributions and funding requirements are governed by ERISA and IRS guidelines and not by Statement No. 158. 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 \$18.3 million will be made in 2009.

The pension liability under Statement No. 158 will be 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. As noted, gold prices increased in each of the last three years while prices for copper, nickel and the majority of the other precious metals we use declined in 2008 after increasing in each of the prior two years. Where possible, such changes in 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 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 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, 2008 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 in accordance with Statement No. 109, "Accounting For Income Taxes". The deferrals are determined 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. See Note P to the Consolidated Financial Statements for additional deferred tax details.

We will also evaluate deferred tax assets for impairment due to cumulative operating losses and record a valuation allowance as warranted. A valuation allowance was recorded in 2002 as a result of the cumulative operating losses at that time. The valuation allowance was adjusted in subsequent years before being fully reversed in the fourth quarter 2006, except for an immaterial amount associated with one international operation, as we determined it was more likely than not that we would utilize substantially all of our deferred tax assets based upon current and projected earnings.

The reversal of the valuation allowance in 2006 resulted in a tax benefit rather than a tax expense being recorded against income before income taxes in that year. Tax expense was recorded in 2007 and 2008 at the effective tax rate without a net adjustment for any material movement in a valuation allowance.

Unearned revenue. 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 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 met. The unearned revenue liability is reversed when the revenue is recognized. 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 \$11.5 million as of December 31, 2008. This total could rise to between \$60.0 and \$70.0 million over the next two to three years 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.

Derivatives. We may use derivative financial instruments to hedge our foreign currency, commodity price and interest rate exposures. We apply hedge accounting when an effective hedge relationship can be documented and maintained. If a 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. 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. 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.

During 2006, changes in the pricing of our copper-based products resulted in a reduction of the previously estimated copper price exposure, reducing the need to hedge the exposure with derivative contracts. Therefore, we terminated contracts in 2006 that were initially scheduled to mature in future periods. The deferred gain in OCI on these contracts and other contracts that matured in the second half of 2006 totaled \$5.7 million as of December 31, 2006. Gains totaling \$0.2 million in 2008 and \$5.5 million in 2007 were amortized to cost of sales in accordance with the original maturity schedules in the contracts.

See Note H to the Consolidated Financial Statements and the Quantitative and Qualitative Disclosures About Market Risk section below for more information on derivatives.

OUTLOOK

The reduced consumer spending levels as a result of the global economic crisis and weaker economy have had a significant impact on the level of demand from a number of our markets. Overall, as of year-end 2008, our backlog was down approximately 8% from one year ago. The demand from portions of the telecommunications and computer, automotive electronics, data storage and other key markets was weak as we entered 2009. The demand from the defense and medical markets, however, was strong in early 2009 as these markets do not necessarily move in tandem with general consumer spending levels. We are hopeful that sales into these markets will remain strong for the majority of 2009, although defense sales can be affected by changes in government budgeted spending and appropriation levels. Development work in various markets, including solar energy, offer growth opportunities for us, even in a down economy.

Various large customers and demand generators in the key markets that we serve have indicated that they cannot project their level of business in 2009 due to the economic uncertainties. With the weak economic conditions, as of early 2009, we believe that we may generate operating losses early in the year, but that as the economy improves and various new programs and products gain additional acceptance, our sales and profitability should improve over the balance of the year. However, we anticipate that sales and profitability in 2009 will be lower than in 2008.

We began making adjustments to our cost structure in the fourth quarter 2008 and we anticipate we will continue to make adjustments in 2009 in order to balance our costs with the current level of business. Headcount was reduced in the fourth quarter 2008 and additional reductions were made and others planned to be made in the first quarter 2009. Other cost control measures have been or will be implemented, including cancellation and delays of various programs and services.

Working capital efficiencies, as measured by DSO and inventory turns, slowed down in 2008. Part of this slowdown was due to the sudden softening of the business in the fourth quarter 2008. During 2009, our plan is to adjust inventories to the level of business. We will continue to aggressively collect receivables and monitor and revise our credit terms in order to minimize our credit exposures. We will also continue to monitor the global economic conditions and to evaluate the impact and potential impact on our borrowing capacity or other aspects of our business.

Capital spending will also be reduced in 2009 from the 2008 level due to the softer business conditions. Construction of the new primary beryllium facility will continue as planned but other spending will be reduced to roughly the maintenance capital level plus high priority and/or high return projects.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

While the global economic crisis and downturn affected our sales and margins in the fourth quarter 2008 as well as the business levels in the first quarter 2009 and potentially beyond, 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 2009. 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. Several of the smaller banks we use for different purposes have been acquired or were in the process of being acquired by other banks as of early in the first quarter 2009, but we do not anticipate these acquisitions will have a material impact on us. 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, 2008. The availability of credit for foreign currency hedging purposes thus far has been unaffected by the crisis while the available precious metal consignment lines may be reduced slightly going forward due to one institution's tentative plans to withdraw from the market. We do not have any financial instruments subject to fair value considerations on our December 31, 2008 balance sheet other than the foreign currency derivative financial instruments that hedge our currency exposure in the normal course of business and the investments held by our directors deferred compensation plan trust.

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.

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 efficient.

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 actually 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. This practice is used more frequently when the rates are high and/or more volatile. 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, 2008, the additional pre-tax cost to us on an annual basis would be approximately \$0.6 million. 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 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. In prior periods, we

entered into derivative contracts to hedge portions of this price exposure and gains on the matured contracts helped to mitigate the negative margin impact of the higher copper prices. There were no copper price derivative contracts outstanding as of December 31, 2008.

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. The market price for ruthenium and other metals fluctuated throughout 2008 and 2007 and, as a result, we recorded lower of cost or market charges totaling \$15.2 million in 2008 and \$4.5 million in 2007 on portions of our inventory. Assuming no changes to the inventory quantities, costs or make-up and no subsequent sales of the inventory, should the market price of ruthenium decline 20% from the December 31, 2008 price, we would have to record a charge of \$0.9 million to write down the exposed portion of the inventory.

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. 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. We did not have any derivatives in place to hedge the interest rate exposure as of December 31, 2008, as the interest rate swap contract that matured in the fourth quarter was not replaced. Assuming no change in amount or make-up of the outstanding debt as of December 31, 2008, a 200 basis point movement upwards in the interest rates would increase our interest expense by \$0.8 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. Should the dollar strengthen, the decline in the translated value of the margins should be 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 \$47.4 million as of December 31, 2008. If the dollar weakened 10% against the currencies we have hedged from the December 31, 2008 exchange rates, the reduced gain and/or increased loss on the outstanding contracts as of December 31, 2008 would reduce pre-tax profits by approximately \$4.5 million in 2009. 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 values of derivatives, which are determined under the guidelines of Statement No. 157, "Fair Value Measurements", are recorded on the balance sheet as assets or liabilities. The fair value of the outstanding foreign currency contracts was a net liability of \$1.2 million at December 31, 2008, indicating that the average hedge rates were unfavorable compared to the actual year-end market exchange rates.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Management's Report on Internal Control over Financial Reporting

The management of Brush Engineered Materials Inc. and subsidiaries is 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, 2008. 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, 2008, the Company's internal control over financial reporting is effective.

The effectiveness of our internal control over financial reporting as of December 31, 2008 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report herein.

/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 Material Inc.'s internal control over financial reporting as of December 31, 2008, 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 Material Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, Brush Engineered Materials Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, 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, 2008 and 2007, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2008 of Brush Engineered Materials Inc. and subsidiaries and our report dated February 25, 2009 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Cleveland, Ohio
February 25, 2009

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, 2008 and 2007, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2008. 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 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, 2008 and 2007, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2008, 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 I to the financial statements, effective December 31, 2006, the Company adopted Statement of Financial Accounting Standards No. 158, Employers' Accounting for Defined Benefit Pensions and Other Postretirement Plans. Also, as discussed in Notes A and P to the financial statements, the Company adopted Financial Accounting Standards Board Interpretation No. 48, Accounting for Uncertainty in Income Taxes — an Interpretation of FASB Statement No. 109, effective January 1, 2007.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Brush Engineered Materials Inc.'s internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 25, 2009 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG, LLP

Cleveland, Ohio
February 25, 2009

Brush Engineered Materials Inc. and Subsidiaries
Years ended December 31, 2008, 2007 and 2006

Consolidated Statements of Income

(Dollars in thousands except share and per share amounts)	2008	2007	2006
Net sales	\$ 909,711	\$ 955,709	\$ 763,054
Cost of sales	757,567	759,037	600,882
Gross profit	152,144	196,672	162,172
Selling, general and administrative expense	104,792	110,127	111,002
Research and development expense	6,522	4,992	4,166
Litigation settlement gain	(1,059)	(8,699)	—
Other — net	13,818	5,787	3,164
Operating profit	28,071	84,465	43,840
Interest expense — net	1,995	1,760	4,135
Income before income taxes	26,076	82,705	39,705
Income taxes (benefit):			
Currently payable	1,563	14,120	2,761
Deferred	6,156	15,300	(12,659)
	7,719	29,420	(9,898)
Net income	\$ 18,357	\$ 53,285	\$ 49,603
Net income per share of common stock — basic	\$ 0.90	\$ 2.62	\$ 2.52
Weighted-average number of shares of common stock outstanding — basic	20,335,000	20,320,000	19,665,000
Net income per share of common stock — diluted	\$ 0.89	\$ 2.59	\$ 2.45
Weighted-average number of shares of common stock outstanding — diluted	20,543,000	20,612,000	20,234,000

See Notes to Consolidated Financial Statements.

Brush Engineered Materials Inc. and Subsidiaries
Years ended December 31, 2008, 2007 and 2006

Consolidated Statements of Cash Flows

(Dollars in thousands)	2008	2007	2006
Cash flows from operating activities:			
Net income	\$ 18,357	\$ 53,285	\$ 49,603
Adjustments to reconcile net income to net cash provided from operating activities:			
Depreciation, depletion and amortization	33,826	23,880	24,602
Amortization of deferred financing costs in interest expense	378	416	539
Stock-based compensation expense	2,552	3,932	1,717
Deferred tax (benefit) expense	6,156	15,300	(12,659)
Derivative financial instruments ineffectiveness	171	121	(214)
Proceeds from early termination of 2007 derivative contracts	—	—	2,297
Changes in assets and liabilities net of acquired assets and liabilities:			
Decrease (increase) in accounts receivable	14,546	(8,471)	(10,853)
Decrease (increase) in other receivables	9,852	(11,263)	—
Decrease (increase) in inventory	12,897	(13,269)	(41,634)
Decrease (increase) in prepaid and other assets	4,713	(3,913)	(5,236)
Increase (decrease) in accounts payable and accrued expenses	(11,890)	(4,926)	20,718
Increase (decrease) in unearned revenue	(2,456)	2,255	60
Increase (decrease) in interest and taxes payable	(14,074)	(2,306)	4,493
Increase (decrease) in long-term liabilities	1,960	(775)	2,307
Other — net	(176)	(3,322)	3,056
Net cash provided from operating activities	76,812	50,944	38,796
Cash flows from investing activities:			
Payments for purchase of property, plant and equipment	(35,515)	(26,429)	(15,522)
Payments for mine development	(421)	(7,121)	—
Reimbursement for capital spending under government contract	8,017	3,472	9
Payments for purchase of business less cash received	(86,052)	—	(25,694)
Proceeds from sale of inventory to consignment line	22,915	—	—
Proceeds from sale of business	—	2,150	—
Proceeds from sale of property, plant and equipment	—	323	56
Other investments — net	66	47	46
Net cash (used in) investing activities	(90,990)	(27,558)	(41,105)
Cash flows from financing activities:			
Proceeds from issuance (repayment) of short-term debt	4,870	(3,607)	3,924
Proceeds from issuance of long-term debt	46,200	16,082	26,000
Repayment of long-term debt	(45,600)	(26,392)	(38,634)
Deferred financing costs	(352)	(825)	—
Repurchase of common stock	(4,999)	—	—
Issuance of common stock under stock option plans	243	4,961	13,612
Tax benefit from the exercise of stock options	455	2,751	2,620
Net cash provided from (used in) financing activities	817	(7,030)	7,522
Effects of exchange rate changes on cash and cash equivalents	177	(270)	(211)
Net change in cash and cash equivalents	(13,184)	16,086	5,002
Cash and cash equivalents at beginning of year	31,730	15,644	10,642
Cash and cash equivalents at end of year	\$ 18,546	\$ 31,730	\$ 15,644

See Notes to Consolidated Financial Statements.

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

Consolidated Balance Sheets

(Dollars in thousands)	2008	2007
Assets		
Current assets		
Cash and cash equivalents	\$ 18,546	\$ 31,730
Accounts receivable (less allowance of \$1,051 for 2008, and \$1,120 for 2007)	89,845	97,424
Other receivables	1,411	11,263
Inventories	156,718	165,189
Prepaid expenses	23,660	17,723
Deferred income taxes	4,199	6,107
Total current assets	294,379	329,436
Other assets	34,444	11,804
Related-party notes receivable	98	98
Long-term deferred income taxes	9,944	1,139
Property, plant and equipment	635,266	583,961
Less allowances for depreciation, amortization and depletion	(428,012)	(397,786)
Property, plant, and equipment — net	207,254	186,175
Goodwill	35,778	21,899
Total Assets	\$ 581,897	\$ 550,551
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt	\$ 30,622	\$ 24,903
Current portion of long-term debt	600	600
Accounts payable	28,014	27,066
Salaries and wages	22,568	34,170
Taxes other than income taxes	1,132	2,209
Other liabilities and accrued items	21,431	19,557
Unearned revenue	113	2,569
Income taxes	—	2,109
Total current liabilities	104,480	113,183
Other long-term liabilities	19,356	11,629
Retirement and post-employment benefits	97,168	57,511
Long-term income taxes	3,028	4,327
Deferred income taxes	163	182
Long-term debt	10,605	10,005
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 26,728,000 in 2008 and 26,708,000 in 2007	170,597	167,347
Retained earnings	334,329	315,972
Common stock in treasury, 6,477,000 shares in 2008 and 6,237,000 shares in 2007	(110,865)	(105,578)
Other comprehensive income (loss)	(47,801)	(24,576)
Other equity transactions	837	549
Total shareholders' equity	347,097	353,714
Total Liabilities and Shareholders' Equity	\$ 581,897	\$ 550,551

See Notes to Consolidated Financial Statements.

Brush Engineered Materials Inc. and Subsidiaries
Years ended December 31, 2008, 2007 and 2006

Consolidated Statements of Shareholders' Equity

	Common Stock	Retained Earnings	Common Stock In Treasury	Other Comprehensive Income (Loss)	Other Equity Transactions	Total
(Dollars in thousands)						
Balances at January 1, 2006	\$137,665	\$214,497	\$(105,795)	\$ (35,037)	\$ 148	\$211,478
Net income	—	49,603	—	—	—	49,603
Foreign currency translation adjustment	—	—	—	605	—	605
Derivative and hedging activity, net of taxes of \$322	—	—	—	623	—	623
Pension and post-employment benefit adjustment, net of taxes of \$4,013	—	—	—	7,840	—	7,840
Comprehensive income						58,671
Impact from adoption of Statement No. 158, net of tax benefit of \$2,905	—	—	—	2,649	—	2,649
Proceeds from exercise of 841,000 shares under option plans	13,612	—	—	—	—	13,612
Income tax benefit from exercise of stock options	2,620	—	—	—	—	2,620
Stock-based compensation expense	1,717	—	—	—	—	1,717
Other equity transactions	(62)	—	30	—	285	253
Balances at December 31, 2006	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 income (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

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 engineered materials used in a variety of markets, including telecommunications and computer electronics, data storage, aerospace and defense, automotive electronics, industrial components, medical 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, 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, 2008. 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 facilities for which depreciation is computed by

the sum-of-the-years digits or units-of-production method. 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, 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. If an evaluation is required, the estimated future undiscounted cash flow associated with the asset or asset group would be compared to the carrying amount to determine if a write-down is required.

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) 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 \$1.0 million in 2008, \$1.0 million in 2007 and \$1.3 million in 2006.

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 records a valuation allowance to reduce the deferred tax assets to the amount that is more likely than not to be realized, as warranted.

The Company adopted Financial Accounting Standards Board (FASB) Interpretation No. 48 (FIN 48), “Accounting for Uncertainty in Income Taxes — an Interpretation of FASB Statement No. 109” as of January 1, 2007. FIN 48 clarifies the financial statement recognition threshold and measurement attribute of a tax position taken or expected to be taken in a tax return in accordance with Statement No. 109, “Accounting for Income Taxes”. This interpretation also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosures and transition. Under FIN 48, the Company applies a more-likely-than-not recognition threshold for all tax uncertainties. FIN 48 only allows the recognition of those tax benefits that have a greater than 50% likelihood of being sustained upon examination by the taxing authorities. As a result of adopting FIN 48, the Company recognized a \$1.4 million increase to its reserve for uncertain tax positions, which is included in long-term income taxes on the Consolidated Balance Sheet. The increase was accounted for as an adjustment to retained earnings as of January 1, 2007. The prior years’ results were not restated for the adoption of FIN 48. See Note P to the Consolidated Financial Statements.

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 2008 consolidated financial statement presentation.

New Pronouncements: The FASB issued Statement No. 157, “Fair Value Measurements” in September 2006. 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 is effective for fiscal years beginning on or after November 15, 2007. The Company adopted this statement as required as of January 1, 2008 and its adoption did not have a material impact on the Consolidated Financial Statements.

The FASB issued Statement No. 159, “The Fair Value Option for Financial Assets and Financial Liabilities — including an amendment of FASB Statement No. 115” in the first quarter 2007. The statement allows entities to value financial instruments and certain other items at fair value. The statement provides guidance over the election of the fair value option, including the timing of the election and specific items eligible for fair value accounting treatment. Changes in fair values would be recognized in earnings. The statement is effective for fiscal years beginning after November 15, 2007. The Company did not adopt the optional provisions of this statement in 2008.

The FASB issued Statement No. 160, “Non-controlling Interests in Consolidated Financial Statements, an amendment of ARB No. 51” in December 2007. 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 is effective for fiscal years beginning on or after December 15, 2008. The Company will adopt this statement as required in 2009 and determined that it will not have any impact on its Consolidated Financial Statements.

The FASB issued Statement No. 141 (Revised 2007), “Business Combinations” in December 2007. 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 contingent assets and liabilities, deferred taxes, research and development costs and other items associated with business combinations. The statement is effective for fiscal years beginning on or after December 15, 2008. The Company will adopt this statement as required in 2009 and determined that it will impact future business combinations.

The FASB issued Statement No. 161, “Disclosures about Derivative Instruments and Hedging Activities — an amendment of FASB Statement No. 133” in March 2008. 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 is effective for fiscal years beginning after November 15, 2008. The Company will adopt this statement as required in 2009 and determined that the adoption will not impact the Consolidated Financial Statements other than the required additional disclosures.

Note B — Acquisitions

In February 2008, one of the Company’s subsidiaries acquired the operating assets of Techni-Met, Inc. 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 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 \$240.0 million revolving credit agreement. Subsequent to the purchase, the Company sold Techni-Met’s precious metal inventory to a financial institution for its market value of approximately \$22.9 million and consigned it back under the existing consignment lines.

Assuming the acquisition of Techni-Met occurred on January 1, 2007, the pro forma effect on selected line items from the Company's Consolidated Statements of Income would be as follows:

(Dollars in thousands, except for per share amounts)	Pro Forma Results (Unaudited)	
	2008	2007
Sales	\$913,518	\$970,175
Income before income taxes	27,539	86,510
Net income	19,261	55,653
Diluted earnings per share	\$ 0.94	\$ 2.70

In January 2006, one of the Company's subsidiaries acquired the stock of CERAC, incorporated for \$26.2 million in cash, including advisor fees. CERAC provides physical vapor deposition and specialty inorganic materials for the precision optics, semiconductor and other industries at its facility in Milwaukee, Wisconsin. Goodwill assigned to the transaction totaled \$8.7 million.

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,	
	2008	2007
Principally average cost:		
Raw materials and supplies	\$ 41,468	\$ 30,338
Work in process	139,552	156,789
Finished goods	50,579	54,530
Gross inventories	231,599	241,657
Excess of average cost over LIFO inventory value	74,881	76,468
Net inventories	<u>\$156,718</u>	<u>\$165,189</u>

Average cost approximates current cost. Gross inventories accounted for using the LIFO method totaled \$154.8 million at December 31, 2008 and \$145.3 million at December 31, 2007. The liquidation of LIFO inventory layers reduced cost of sales by \$0.4 million in 2008 and \$0.4 million in 2007.

Lower of cost or market charges reduced net inventories by \$15.2 million in 2008 and \$4.5 million in 2007.

Note D —Property, Plant and Equipment

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

	December 31,	
	2008	2007
(Dollars in thousands)		
Land	\$ 8,729	\$ 7,959
Buildings	111,239	107,970
Machinery and equipment	452,702	416,663
Software	24,570	21,826
Construction in progress	25,455	17,393
Allowances for depreciation	(420,790)	(395,736)
	201,905	176,075
Mineral resources	5,029	5,029
Mine development	7,542	7,121
Allowances for amortization and depletion	(7,222)	(2,050)
	5,349	10,100
Property, plant and equipment — net	<u>\$ 207,254</u>	<u>\$ 186,175</u>

Depreciation expense was \$30.3 million in 2008, \$22.7 million in 2007, and \$23.6 million in 2006.

Note E —Intangible Assets

Assets Acquired

The Company acquired the following intangible assets in 2008:

	<u>Amount</u>	<u>Weighted-average Amortization Period</u>
(Dollars in thousands)		
Customer relationship	\$18,300	10.0 Years
Technology	7,400	10.0 Years
Non-compete contract	500	2.0 Years
Deferred financing costs	352	4.8 Years
Total assets subject to amortization	<u>\$26,552</u>	9.8 Years
Goodwill	<u>\$13,879</u>	Not Applicable

The customer relationship, technology and non-compete contract intangible assets and the goodwill were acquired as part of the first quarter 2008 purchase of the operating assets of Techni-Met, Inc.

Assets Subject to Amortization

The cost, accumulated amortization and net book value of intangible assets subject to amortization as of December 31, 2008 and 2007 and the amortization expense for each year then ended is as follows:

	<u>2008</u>	<u>2007</u>
(Dollars in thousands)		
Deferred financing costs		
Cost	\$ 4,311	\$ 3,959
Accumulated amortization	(2,740)	(2,362)
Net book value	1,571	1,597
Customer relationships		
Cost	24,650	6,350
Accumulated amortization	(4,013)	(1,658)
Net book value	20,637	4,692
Technology		
Cost	9,420	2,020
Accumulated amortization	(1,054)	(254)
Net book value	8,366	1,766
Patents		
Cost	690	690
Accumulated amortization	(690)	(690)
Net book value	—	—
Customer contract		
Cost	283	283
Accumulated amortization	(283)	(189)
Net book value	—	94
License		
Cost	220	220
Accumulated amortization	(118)	(74)
Net book value	102	146
Non-compete contracts		
Cost	500	—
Accumulated amortization	(229)	—
Net book value	271	—
Total		
Cost	\$40,074	\$13,522
Accumulated amortization	(9,127)	(5,227)
Net book value	<u>\$30,947</u>	<u>\$ 8,295</u>
Aggregate amortization expense	<u>\$ 3,900</u>	<u>\$ 1,592</u>

The aggregate amortization expense is estimated to be \$4.1 million in 2009, \$3.8 million in 2010, \$3.8 million in 2011, \$3.6 million in 2012 and \$3.2 million in 2013.

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 2008 and 2007 is as follows:

(Dollars in thousands)	2008	2007
Balance at the beginning of the year	\$21,899	\$21,843
Current year acquisitions	13,879	—
Adjustments to goodwill from prior year acquisitions	—	116
Other	—	(60)
Balance at the end of the year	<u>\$35,778</u>	<u>\$21,899</u>

Costs associated with a potential joint venture totaling \$0.1 million were capitalized into goodwill in 2006. The Company decided not to pursue the joint venture in 2007 and this amount was charged to expense accordingly.

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 2007 was not.

Note F — Debt

A summary of long-term debt follows:

(Dollars in thousands)	December 31,	
	2008	2007
Revolving credit agreement	\$ 2,300	\$ 1,100
Variable rate demand bonds payable in installments beginning in 2005	600	1,200
Variable rate industrial development revenue bonds payable in 2016	8,305	8,305
	11,205	10,605
Current portion of long-term debt	(600)	(600)
Total	<u>\$10,605</u>	<u>\$10,005</u>

Maturities on long-term debt instruments as of December 31, 2008 are as follows:

2009	\$ 600
2010	—
2011	—
2012	2,300
2013	—
Thereafter	8,305
Total	<u>\$11,205</u>

In November 2007, the Company entered into a senior secured credit agreement with six financial institutions to replace its \$125.0 million asset-based lending facility. The agreement provides for a \$240.0 million revolving credit facility comprised of sub-facilities for short and long term loans, letters of credit and foreign borrowings and expires in November 2012. The credit agreement also provides for an uncommitted incremental facility whereby, under certain circumstances, the Company may be able to borrow additional term loans in an aggregate amount not to exceed \$50.0 million. At December 31, 2008, the maximum availability under this facility was \$211.5 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% and \$26.2 million outstanding against the letters of credit sub-facility.

The Company pays a variable commitment fee that resets quarterly (0.125% as of December 31, 2008) 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 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, 2008			December 31, 2007		
	Total	Outstanding	Available	Total	Outstanding	Available
Domestic	\$211,466	\$ —	\$211,466	\$211,584	\$ —	\$211,584
Foreign	16,794	10,052	6,742	10,470	5,076	5,394
Precious metal	20,570	20,570	—	19,827	19,827	—
Total	<u>\$248,830</u>	<u>\$ 30,622</u>	<u>\$218,208</u>	<u>\$241,881</u>	<u>\$ 24,903</u>	<u>\$216,978</u>

The domestic line is committed and includes all sub-facilities (which can be borrowed on a short-term or long-term basis) 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. The precious metal facility is secured and renewed annually. The average interest rate on short-term debt was 2.75% and 2.96% as of December 31, 2008 and 2007, 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 1.00% to 8.11% in 2008 and from 3.44% to 4.29% in 2007.

The final \$0.6 million installment on the \$3.0 million variable rate demand bonds is scheduled to be paid in 2009. The variable rate on these bonds ranged from 1.04% to 10.00% in 2008 and from 3.21% to 4.13% during 2007.

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 \$7.6 million, \$7.9 million, and \$7.4 million, during 2008, 2007, and 2006, respectively. The future estimated minimum lease payments under non-cancelable operating leases with initial lease terms in excess of one year at December 31, 2008, are as follows: 2009 — \$7.1 million; 2010 — \$6.6 million; 2011 — \$6.0 million; 2012 — \$3.2 million; 2013 — \$2.9 million and thereafter — \$26.5 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 —Derivative Financial Instruments and Fair Value Information

The Company adopted Statement No. 157, “Fair Value Measurements” as of January 1, 2008 and no adjustments to the fair values of any assets or liabilities were recorded as a result of the statement’s adoption. In accordance with this statement, the Company measures and records its outstanding derivative contracts and the investments held in a trust under the directors’ deferred compensation plan at fair value. The Company elected to defer the application of the statement to its non-financial assets and liabilities as allowed under FSP 157-2. The statement establishes a hierarchy 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 accompanying Consolidated Balance Sheet as of December 31, 2008:

(Dollars in thousands) Description	Dec. 31, 2008	Fair Value at Reporting Date Using:		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Financial Assets				
Foreign currency contracts				
Forward contracts	\$1,022	\$ —	\$ 1,022	\$ —
Options	212	—	212	—
Directors' deferred compensation investments	831	831	—	—
Total	\$2,065	\$ 831	\$ 1,234	\$ —
Financial Liabilities				
Foreign currency contracts				
Forward contracts	\$2,390	\$ —	\$ 2,390	\$ —
Directors' deferred compensation liability	1,481	1,481	—	—
Total	\$3,871	\$ 1,481	\$ 2,390	\$ —

The Company uses a market approach to value the assets and liabilities for the derivative contracts in the above table. These contracts are valued using an approach that incorporates quoted market prices at the balance sheet date.

The Company is exposed to interest rate, commodity price and foreign currency exchange rate differences and attempts to minimize the effects of these exposures through a combination of natural hedges and the use of derivative financial instruments. The Company has policies approved by the Board of Directors that establish the parameters for the allowable types of derivative instruments to be used, the maximum allowable contract periods, aggregate dollar limitations and other hedging guidelines. The Company will only secure a derivative if there is an identifiable underlying exposure that is not otherwise covered by a natural hedge. In general, derivatives will be held until maturity. A derivative may be terminated early if there is a change in the underlying exposure. The following

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table summarizes the notional amount and the fair value (which is the carrying amount on the Consolidated Balance Sheets) of the Company's outstanding derivatives and debt as of December 31, 2008 and 2007.

(Dollars in thousands) Asset/(liability)	December 31, 2008		December 31, 2007	
	Notional Amount	Carrying Amount	Notional Amount	Carrying Amount
Foreign currency contracts				
Forward contracts				
Yen	\$18,997	\$ (2,390)	\$15,044	\$ (151)
Euro	22,513	537	23,185	(1,164)
Sterling	3,194	485	4,382	97
Total	<u>\$44,704</u>	<u>\$ (1,368)</u>	<u>\$42,611</u>	<u>\$ (1,218)</u>
Options				
Euro	<u>\$ 2,689</u>	<u>\$ 212</u>	<u>\$ 7,210</u>	<u>\$ (302)</u>
Interest rate swap contract				
Floating to fixed	\$ —	\$ —	\$23,201	\$ (444)
Short and long-term debt	—	\$(41,827)	—	\$(35,508)

The derivative fair values were included in the Consolidated Balance Sheets as follows:

(Dollars in thousands) Asset/(liability)	December 31,	
	2008	2007
Prepaid expenses	\$ 1,234	\$ 97
Other assets	—	12
Other liabilities and accrued items	(2,354)	(2,073)
Other long-term liabilities	(36)	—
Total	<u>\$(1,156)</u>	<u>\$(1,964)</u>

The balance sheet classification of the fair values is dependent upon the Company's rights and obligations under each derivative and the remaining term to maturity. Changes in fair values of derivatives are recorded in income or other comprehensive income (loss) (hereafter "OCI") as appropriate. A reconciliation of the changes in fair values and other derivative activity recorded in OCI on a pre-tax basis for 2008 and 2007 is as follows:

(Dollars in thousands)	2008	2007
Balance in other comprehensive income (loss) at January 1	\$(1,304)	\$ 4,926
Changes in fair values and other current period activity	(2,912)	(2,145)
Matured derivatives — (credited) charged to expense	3,060	(4,085)
Balance in other comprehensive income (loss) at December 31	<u>\$(1,156)</u>	<u>\$(1,304)</u>

All of the outstanding derivative contracts were designated as cash flow hedges at inception and qualified for hedge accounting treatment as of December 31, 2008. An interest rate swap contract that was outstanding as of December 31, 2007 matured during the fourth quarter 2008. This contract was initially designated as a cash flow hedge but it did not qualify for hedge accounting treatment once the underlying hedged item, the variable rate portion of an operating lease, was terminated in December 2003. Changes in the swap's fair value subsequent to that time were charged to income or expense in the current period.

Hedge ineffectiveness, primarily changes in the fair value of the aforementioned interest rate swap, was an expense of \$0.2 million in 2008, an expense of \$0.1 million in 2007 and income of \$0.2 million in 2006. Ineffectiveness is recorded in other-net expense on the Consolidated Statements of Income.

Assuming no change from the applicable December 31, 2008 exchange rates, \$1.1 million will be charged from OCI to expense during 2009.

Foreign Exchange Hedge Contracts

The Company uses forward and option contracts to hedge anticipated foreign currency transactions, primarily foreign sales. The purpose of the program is to protect against the reduction in value of the foreign currency transactions from adverse exchange rate movements. Should the dollar strengthen significantly, the decrease in the translated value of the foreign currency transactions should be partially offset by gains on the hedge contracts. Depending upon the method used, the contract may limit the benefits from a weakening of the dollar. The Company's policy limits contracts to maturities of two years or less from the date of issuance. The outstanding contracts as of year-end 2008 had maturities ranging up to 18 months; the outstanding contracts as of year-end 2007 had maturities ranging up to 15 months. Realized gains and losses on foreign exchange contracts are recorded in other-net on the Consolidated Statements of Income. The total exchange gain (loss), which includes realized and unrealized gains and losses, was \$(3.7) million in 2008, \$(0.6) million in 2007 and \$1.4 million in 2006.

Interest Rate Hedge Contracts

The Company attempts to minimize its exposure to interest rate variations by using combinations of fixed and variable rate instruments with varying lengths of maturities. Depending upon the interest rate yield curve, credit spreads, projected borrowing requirements and rates, cash flow considerations and other factors, the Company may elect to secure interest rate swaps, caps, collars, options or other related derivative instruments to hedge portions of its interest rate exposure. Both fixed-to-variable and variable-to-fixed interest rate instruments may be used.

The Company did not secure a new interest rate swap to replace the matured swap in the fourth quarter 2008 due to the available market rates, cost to hedge, net exposure and other factors.

Copper Price Contracts

The Company purchases and manufactures products containing copper. Purchases are exposed to price fluctuations in the copper market. However, for a significant portion of its copper-based products, the Company will adjust its selling prices to customers to reflect the change in its copper purchase price. This program is designed to be profit neutral; i.e., any changes in copper prices, either up or down, will be directly passed on to the customer.

Historically, the Company used copper price contracts (i.e. swaps and options) to hedge the copper purchase price for those volumes where price fluctuations cannot be passed on to the customer. The Company makes or receives payments based on a difference between a fixed price (as specified in each individual contract) and the market price of copper. These payments will offset the change in prices of the underlying purchases and effectively fix the price of copper at the contracted rate for the contracted volume. The Company's policy limits commodity hedge contracts, including copper price contracts, to maturities of 27 months or less from the original date of issuance. Realized gains and losses on copper hedge contracts are deferred into OCI and then amortized to cost of sales on the Consolidated Statements of Income over the inventory turnover period.

During the second half of 2006, the Company increased the percentage of its sales of copper-based products that are subject to the copper price pass-through, thereby reducing the underlying copper price exposure and the need for hedging with derivative contracts. The outstanding contracts that were initially scheduled to mature in 2007 were terminated early at a gain in 2006 and the gain was deferred into OCI. The deferred gain on these contracts and other contracts that matured in the second half of 2006 totaled \$5.7 million as of December 31, 2006, \$5.5 million of which was amortized to cost of sales in 2007. The remaining \$0.2 million balance in OCI as of December 31, 2007 was amortized to cost of sales in 2008. There were no copper swap hedge contracts outstanding as of December 31, 2008.

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	
	2008	2007	2008	2007
Change in benefit obligation				
Benefit obligation at beginning of year	\$134,741	\$134,128	\$ 34,239	\$ 31,437
Service cost	5,297	5,001	303	301
Interest cost	8,490	7,977	2,127	1,909
Plan amendments	—	889	—	—
Actuarial (gain) loss	4,241	(6,620)	(1,325)	3,100
Benefit payments from fund	(5,682)	(6,461)	—	—
Benefit payments directly by Company	(112)	(109)	(2,955)	(3,119)
Expenses paid from assets	(360)	(649)	—	—
Medicare Part D subsidy	—	—	397	611
Foreign currency exchange rate changes	(1,091)	585	—	—
Benefit obligation at end of year	<u>145,524</u>	<u>134,741</u>	<u>32,786</u>	<u>34,239</u>
Change in plan assets				
Fair value of plan assets at beginning of year	111,872	106,630	—	—
Actual return on plan assets	(27,372)	8,199	—	—
Employer contributions	4,451	4,111	—	—
Benefit payments from fund	(5,682)	(6,461)	—	—
Expenses paid from assets	(360)	(649)	—	—
Foreign currency exchange rate changes	(1,099)	42	—	—
Fair value of plan assets at end of year	<u>81,810</u>	<u>111,872</u>	<u>—</u>	<u>—</u>
Funded status at end of year	<u>\$ (63,714)</u>	<u>\$ (22,869)</u>	<u>\$ (32,786)</u>	<u>\$ (34,239)</u>
Amounts recognized in the Consolidated Balance Sheets consist of:				
Other liabilities and accrued items	\$ —	\$ —	\$ (2,856)	\$ (3,033)
Retirement and post-employment benefits	(63,714)	(22,869)	(29,930)	(31,206)
	<u>\$ (63,714)</u>	<u>\$ (22,869)</u>	<u>\$ (32,786)</u>	<u>\$ (34,239)</u>
Amounts recognized in other comprehensive income (before tax) consist of:				
Net actuarial (gain) loss	\$ 67,518	\$ 28,159	\$ (449)	\$ 876
Net prior service (credit) cost	(6,139)	(6,822)	93	57
	<u>\$ 61,379</u>	<u>\$ 21,337</u>	<u>\$ (356)</u>	<u>\$ 933</u>
Amortizations expected to be recognized during next fiscal year (before tax):				
Amortization of net loss	\$ 2,024	\$ 1,182	\$ —	\$ —
Amortization of prior service credit	(644)	(644)	(36)	(36)
	<u>\$ 1,380</u>	<u>\$ 538</u>	<u>\$ (36)</u>	<u>\$ (36)</u>
Additional information				
Accumulated benefit obligation for all defined benefit pension plans	\$142,896	\$132,050	N/A	N/A
For defined benefit pension plans with benefit obligations in excess of plan assets:				
Aggregate benefit obligation	142,602	130,435	N/A	N/A
Aggregate fair value of plan assets	78,806	107,138	N/A	N/A
For defined benefit pension plans with accumulated benefit obligations in excess of plan assets:				
Aggregate accumulated benefit obligation	139,974	127,744	N/A	N/A
Aggregate fair value of plan assets	78,806	107,138	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		
	2008	2007	2006	2008	2007	2006
Net periodic benefit cost						
Service cost	\$ 5,297	\$ 5,001	\$ 5,442	\$ 303	\$ 301	\$ 295
Interest cost	8,490	7,977	7,445	2,127	1,909	1,903
Expected return on plan assets	(9,061)	(9,002)	(8,558)	—	—	—
Amortization of prior service (benefit)	(644)	(660)	(709)	(36)	(36)	(36)
Recognized net actuarial loss	1,186	1,823	2,199	—	—	—
Curtailment (gain)	—	—	(470)	—	—	—
Net periodic benefit cost	<u>\$ 5,268</u>	<u>\$ 5,139</u>	<u>\$ 5,349</u>	<u>\$2,394</u>	<u>\$2,174</u>	<u>\$2,162</u>

(Dollars in thousands)	Pension Benefits			Other Benefits		
	2008	2007	2006	2008	2007	2006
Change in other comprehensive income						
OCI at beginning of year	\$21,337	\$27,437	\$ 36,830	\$ 933	\$(2,203)	N/A
Increase (decrease) in OCI						
Recognized during year — prior service cost (credit)	644	660	—	36	36	N/A
Recognized during year — net actuarial (losses) gains	(1,225)	(1,823)	—	—	—	N/A
Occurring during year — prior service cost	39	889	—	—	—	N/A
Occurring during year — net actuarial losses (gains)	40,677	(5,817)	—	(1,325)	3,100	N/A
Increase (decrease) prior to adoption of Statement No. 158	—	—	(11,875)	—	—	N/A
Increase (decrease) due to adoption of Statement No. 158	—	—	2,432	—	—	(2,203)
Foreign currency exchange rate changes	(93)	(9)	50	—	—	—
OCI at end of year	<u>\$61,379</u>	<u>\$21,337</u>	<u>\$ 27,437</u>	<u>\$ (356)</u>	<u>\$ 933</u>	<u>\$(2,203)</u>

Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income

(Dollars in thousands)	Pension Benefits			Other Benefits		
	2008	2007	2006	2008	2007	2006
Total cost (benefit) recognized in OCI prior to adoption of Statement No. 158	N/A	N/A	\$(11,875)	N/A	N/A	N/A
Total cost (benefit) recognized in net periodic benefit cost and OCI prior to adoption of Statement No. 158	N/A	N/A	\$ (6,526)	N/A	N/A	\$2,162

Summary of key valuation assumptions

	Pension Benefits			Other Benefits		
	2008	2007	2006	2008	2007	2006
Weighted-average assumptions used to determine benefit obligations at fiscal year end						
Discount rate	6.16%	6.44%	N/A	6.15%	6.50%	N/A
Rate of compensation increase	2.03%	4.43%	N/A	2.00%	4.50%	N/A
Weighted-average assumptions used to determine net cost for the fiscal year						
Discount rate	6.41%	5.95%	5.61%	6.50%	6.13%	5.75%
Expected long-term return on plan assets	8.21%	8.46%	8.47%	N/A	N/A	N/A
Rate of compensation increase	4.34%	4.35%	4.35%	4.50%	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 in accordance with Statement No. 87, "Employers' Accounting for Pensions". 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. Effective January 1, 2006, the Company revised the expected long-term rate of return assumption used in calculating the annual expense for its domestic pension plan to 8.5% from 8.75%, 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 4% of the Company's aggregated total fair value of plan assets as of year-end 2008.

	2008	2007
Assumed health care trend rates at fiscal year end		
Health care trend rate assumed for next year	8.00%	9.00%
Rate that the trend rate gradually declines to (ultimate trend rate)	5.00%	5.00%
Year that the rate reaches the ultimate trend rate	2012	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	
	2008	2007	2008	2007
Effect on total of service and interest cost components	\$ 53	\$ 40	\$ (48)	\$ (36)
Effect on post-retirement benefit obligation	796	879	(718)	(795)

Plan Assets

The Company's domestic defined benefit pension plan weighted-average asset allocation at fiscal year end 2008 and 2007 and target allocation are as follows:

<u>Asset Category</u>	<u>Target Allocation</u>	<u>Percentage of Pension Plan Assets At Fiscal Year End</u>	
		<u>2008</u>	<u>2007</u>
Equity securities	25-55%	33%	56%
Debt securities	20-40%	39%	26%
Real estate	5-15%	6%	8%
Other	3-43%	22%	10%
Total	100%	100%	100%

The Company's 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. 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 \$18.3 million to its domestic pension plan and \$2.9 million to its other benefit plans in 2009.

Estimated Future Benefit Payments

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

<u>During Fiscal Years (Dollars in thousands)</u>	<u>Pension Benefits</u>	<u>Other Benefits</u>	
		<u>Gross Benefit Payment</u>	<u>Net of Medicare Part D Subsidy</u>
2009	\$ 5,772	\$ 3,248	\$ 2,856
2010	6,169	3,329	2,914
2011	6,533	3,367	2,934
2012	7,261	3,368	2,912
2013	7,848	3,358	2,889
2014 through 2018	48,110	15,888	13,253

Other Benefit Plans

The Company also has accrued unfunded retirement arrangements for certain directors. The benefit obligation for these arrangements was \$0.1 million at December 31, 2008 and \$0.1 million at December 31, 2007. A corresponding accumulated benefit obligation of equal amounts has been recognized as a liability and is included in retirement and post-employment benefits as of the respective year-ends. Certain foreign subsidiaries have accrued unfunded pension and other post-employment arrangements. The liability for these arrangements was \$2.8 million at December 31, 2008 and \$2.8 million at December 31, 2007 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 \$3.0 million in 2008, \$2.9 million in 2007 and \$2.5 million in 2006. The Company reduced its matching percentage in half effective at the beginning 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 \$2.0 million as of December 31, 2008 and \$1.3 million at December 31, 2007. The reserve is included in other long-term liabilities on the Consolidated Balance Sheets. The Company also recorded an asset of \$1.7 million as of December 31, 2008 and \$1.0 million as of December 31, 2007 for recoveries from insurance carriers on the outstanding insured claims. The asset is included in other assets on the Consolidated Balance Sheets. There were no settlement payments made in 2008 for beryllium litigation while settlement payments totaled \$0.1 million in 2007.

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 on-going analyses of the remediation sites and will use outside consultants to assist in their analyses from time to time. Accruals are based upon their analyses and are established at either the best estimate or, absent a best estimate, at the low end of the estimated range of costs. The accruals are revised for the results of on-going studies 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 for environmental remediation projects was \$6.3 million at December 31, 2008 and \$5.2 million at December 31, 2007. The long-term portion of the reserve included in other long-term liabilities on the Consolidated Balance Sheets was \$4.9 million at both December 31, 2008 and 2007. The remaining portion of the reserve in each year was included in other accrued liabilities. 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.

In 2008, the Company increased the reserve \$1.1 million for clean-up costs associated with the Company's former headquarters building; this facility, which the Company still owned as of year-end 2008, had previously been used for light manufacturing and research and development work. The reserve was also increased \$0.3 million for changes in estimates on existing projects in 2008. Payments against the reserve totaled \$0.3 million in 2008. In 2007, the Company paid \$0.1 million against the environmental reserve and expensed \$0.2 million for changes in estimates and for a newly identified small project.

Long-term Obligation

The Company had a long-term supply arrangement with Ulba/Kazatomprom of the Republic of Kazakhstan and their marketing representative, Nukem, Inc. of Connecticut that terminated on December 31, 2008. The agreement, as amended, allowed for purchases of beryllium-containing materials to be made through 2012 if a new price could be negotiated for deliveries in 2009 through 2012. The parties were unable to reach agreement on a new price and the agreement was terminated accordingly. Future purchases may be made from Nukem from time to time through the Company's normal purchasing practices. Purchases of beryllium-containing materials from Nukem were \$8.9 million in 2008, \$6.4 million in 2007 and \$9.1 million in 2006.

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 and \$0.7 million in 2006. The purchased material served as a raw material input for operations within Specialty Engineered Alloys and Beryllium and Beryllium Composites.

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 with the patent infringement case set for trial in the first half of 2009. 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, 2008, nor has the Company recorded a reserve for losses under these indemnification agreements as of December 31, 2008. 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 \$16.7 million related to workers' compensation, consigned precious metal guarantees, environmental remediation issues and other matters that expire in 2009.

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, 2006	25,557
Exercise of stock options	841
Issued as of December 31, 2006	26,398
Exercise of stock options	296
Vesting of restricted shares	14
Issued as of December 31, 2007	26,708
Exercise of stock options	12
Vesting of restricted shares	8
Issued as of December 31, 2008	26,728

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 1 cent per right under certain circumstances.

New 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 the 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.

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 2008, less than

\$0.1 million in 2007 and \$0.3 million in 2006. There is no remaining unvested value to be expensed on the outstanding options as of December 31, 2008.

The following table summarizes the Company's stock option activity for the year ended December 31, 2008:

(Shares in thousands)	Number of Options	Weighted- average Exercise Price Per Share	Aggregate Intrinsic Value	Weighted- average Remaining Term
Outstanding at December 31, 2007	367	\$ 15.95		
Exercised	(12)	20.19		
Outstanding at December 31, 2008	355	15.81	\$ 271	4.30 years
Vested and expected to vest as of December 31, 2008	355	15.81	\$ 271	4.30 years
Exercisable at December 31, 2008	355	15.81	\$ 271	4.30 years

Summarized information on options outstanding as of December 31, 2008 follows:

	Number Outstanding and Exercisable (in Thousands)	Weighted- average Remaining Life (in Years)	Weighted- average Exercise Price
Range of Option Prices			
\$5.55-\$8.10	36	4.25	\$ 6.09
\$12.15-\$14.80	75	4.05	12.81
\$15.97-\$17.68	193	4.98	17.10
\$20.64-\$22.43	51	2.13	22.22
	355	4.30	\$ 15.81

Cash received from the exercise of stock options totaled \$0.2 million in 2008, \$5.0 million for 2007 and \$13.6 million for 2006. The tax benefit realized from tax deductions from exercises was \$0.5 million in 2008, \$2.8 million in 2007 and \$2.6 million in 2006. The total intrinsic value of options exercised during the year ended December 31, 2008, 2007 and 2006 was \$0.1 million, \$9.3 million and \$8.2 million, respectively.

Restricted Stock

The Company may grant restricted stock to employees and non-employee directors of the Company. These shares must be held and not disposed 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 units is based on the stock price on the date of grant. The weighted-average grant date fair value for 2008, 2007 and 2006 was \$28.67, \$44.98 and \$24.77, respectively.

Compensation cost was \$1.7 million in 2008, \$1.3 million in 2007 and \$0.3 million in 2006. The unamortized compensation cost on the outstanding restricted stock was \$2.1 million as of December 31, 2008 and is expected to be amortized over a weighted-average period of 16 months.

The following table summarizes the restricted stock activity during 2008:

(Shares in thousands)	Number of Shares	Weighted-average Grant Date Fair Value
Outstanding at December 31, 2007	83	\$ 39.82
Granted	63	28.67
Vested	(8)	46.01
Forfeited	(3)	37.15
Outstanding at December 31, 2008	135	\$ 34.35

Long-term Incentive Plans

Under long-term incentive compensation plans, executive officers and selected other employees receive cash or stock awards based upon the Company's performance over the defined period, typically three years. Awards may vary based upon the degree to which actual performance exceeds the pre-determined threshold, target and maximum performance levels at the end of the performance periods. Payouts may be subjected to attainment of threshold performance objectives.

Under the 2006-2008, 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. 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 which totaled \$0.1 million for 2008, \$1.9 million for 2007 and \$0.7 million for 2006. The related balance in shareholders' equity was \$2.7 million as of December 31, 2008.

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 may also transfer their deferred amounts between 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 are reflected as a change in the liability and an increase or decrease to expense.

The following table summarizes the stock activity for the directors' deferred compensation plan during 2008:

(Shares in thousands)	Number of Shares	Weighted-average Grant Date Fair Value
Outstanding at December 31, 2007	77	\$ 18.98
Granted	12	24.18
Outstanding at December 31, 2008	89	\$ 19.68

The Company recorded income of \$1.2 million on the directors' deferred compensation plan in 2008, an expense of \$0.3 million in 2007 and expense of \$1.3 million in 2006. During the years ended December 31, 2008, 2007 and 2006, the weighted-average grant date fair value of shares granted was \$24.18, \$45.22 and \$22.81, 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 of 2008, the Company issued approximately 32,000 SAR at a strike price of \$27.78 per share. The SAR vest three years from the date of grant and expire in ten years.

	Number of SAR	Weighted- average Exercise Price Per Share	Aggregate Intrinsic Value	Weighted- average Remaining Term
(Shares in thousands)				
Outstanding at December 31, 2007	157	\$ 29.35		
Granted	32	27.78		
Expired/Cancelled	(9)	28.92		
Outstanding at December 31, 2008	180	29.09	—	7.81 years
Vested and expected to vest as of December 31, 2008	180	29.09	—	7.81 years
Exercisable at December 31, 2008	—	—	—	—

The fair value of the SAR granted in 2008 was \$14.05. The fair value will be amortized to compensation cost on a straight-line basis over the three-year vesting period. Compensation cost was \$0.8 million, \$0.7 million and \$0.3 million for 2008, 2007 and 2006, respectively and was included in selling, general and administrative expense. The unamortized compensation cost balance was \$0.8 million as of December 31, 2008.

Summarized information on SAR outstanding as of December 31, 2008 follows:

SAR Prices	Number Outstanding (in thousands)	Weighted-average Remaining Life (in Years)	Weighted-average Exercise Price
\$24.03	111	7.34	\$ 24.03
\$27.78	30	9.13	27.78
\$44.72	39	8.13	44.72
	180	7.81	\$ 29.09

None of the SAR in the table above are exercisable.

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

	2008	2007	2006
Risk-free interest rate	2.14%	5.03%	4.69%
Dividend yield	0%	0%	0%
Volatility	49.2%	45.7%	44.2%
Expected lives (in years)	6.5	6.0	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 under the disclosure only provisions of Statement No. 123 prior to 2006. 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 similar manner 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, 2008, 2007 and 2006.

	December 31,		
	2008	2007	2006
(Dollars in thousands)			
Foreign currency translation adjustment	\$ 2,346	\$ 41	\$ (1,583)
Derivative financial instruments (net of taxes of (\$1,808) in 2008, (\$1,859) in 2007 and \$322 in 2006)	652	555	4,604
Pension and other retirement plan adjustment (net of taxes of (\$10,224) in 2008, \$2,902 in 2007 and \$1,108 in 2006)	(50,799)	(25,172)	(26,341)
Total	<u>\$(47,801)</u>	<u>\$(24,576)</u>	<u>\$(23,320)</u>

Note M —Segment Reporting and Geographic Information

(Dollars in thousands)	Advanced Material Technologies and Services	Specialty Engineered Alloys	Beryllium and Beryllium Composites	Engineered Material Systems	Subtotal	All Other	Total
2008							
Revenues from external customers	\$ 466,447	\$ 299,867	\$ 63,604	\$ 65,913	\$ 895,831	\$ 13,880	\$ 909,711
Intersegment revenues	7,180	776	452	1,405	9,813	—	9,813
Operating profit (loss)	10,336	5,846	8,372	5,931	30,485	(2,414)	28,071
Depreciation, depletion and amortization	9,872	18,246	740	2,273	31,131	2,695	33,826
Expenditures for long-lived assets	7,759	9,145	13,165	1,145	31,214	4,722	35,936
Assets	208,388	239,810	54,224	23,087	525,509	56,388	581,897
2007							
Revenues from external customers	\$ 519,940	\$ 289,971	\$ 60,489	\$ 70,886	\$ 941,286	\$ 14,423	\$ 955,709
Intersegment revenues	5,152	3,546	1,062	2,127	11,887	—	11,887
Operating profit	59,366	7,585	7,837	4,726	79,514	4,951	84,465
Depreciation, depletion and amortization	5,340	12,510	900	2,340	21,090	2,790	23,880
Expenditures for long-lived assets	10,337	12,485	5,089	2,963	30,874	2,676	33,550
Assets	188,936	229,582	38,148	26,843	483,509	67,042	550,551
2006							
Revenues from external customers	\$ 343,448	\$ 275,641	\$ 57,627	\$ 68,734	\$ 745,450	\$ 17,604	\$ 763,054
Intersegment revenues	4,332	5,572	732	3,000	13,636	27	13,663
Operating profit (loss)	30,536	7,948	7,448	2,742	48,674	(4,834)	43,840
Depreciation, depletion and amortization	5,770	12,540	1,040	2,436	21,786	2,816	24,602
Expenditures for long-lived assets	6,283	4,530	1,920	1,756	14,489	1,033	15,522
Assets	149,451	234,366	33,042	26,232	443,091	55,515	498,606

Intersegment revenue is eliminated in consolidation. The revenues from external customers are presented net of intersegment revenues. Segments are evaluated using operating profit.

The All Other column includes the operating results of Zentrix Technologies Inc., Circuits Processing Technology, Inc. (CPT) and BEM Services, Inc., all wholly owned subsidiaries, and other corporate charges. Zentrix manufactures electronic packages and other components for sales to the telecommunications and computer and automotive electronics market. In the first quarter 2007, the Company sold the operating assets of CPT, a small facility that manufactured circuitry for defense and commercial applications. BEM Services Inc. provides administrative and financial services to the other businesses in the Company on a cost-plus basis. The All Other assets include used by the aforementioned subsidiaries as well as cash and long-term deferred income taxes.

Sales from U.S. operations to external domestic and foreign customers were \$692.6 million in 2008, \$714.3 million in 2007 and \$585.8 million in 2006. Revenues 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)	2008	2007	2006
Revenues			
United States	\$590,501	\$542,753	\$499,681
All other	<u>319,210</u>	<u>412,956</u>	<u>263,373</u>
Total	<u>\$909,711</u>	<u>\$955,709</u>	<u>\$763,054</u>
Long-lived Assets			
United States	\$260,353	\$203,473	\$196,328
All other	<u>13,626</u>	<u>12,896</u>	<u>10,506</u>
Total	<u>\$273,979</u>	<u>\$216,369</u>	<u>\$206,834</u>

No individual country, other than the United States, or customer accounted for 10% or more of the Company's revenues for the years presented. Revenues from 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 represent 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 2008, 2007 and 2006.

(Dollars in thousands)	2008	2007	2006
Interest incurred	\$2,365	\$2,138	\$4,271
Less capitalized interest	370	378	136
Total net expense	<u>\$1,995</u>	<u>\$1,760</u>	<u>\$4,135</u>
Interest paid	<u>\$2,193</u>	<u>\$2,104</u>	<u>\$3,874</u>
Amortization of capitalized interest included in cost of sales	<u>\$ 595</u>	<u>\$ 567</u>	<u>\$ 525</u>

The difference in expense among 2008, 2007 and 2006 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 2008, \$0.4 million in 2007 and \$0.5 million in 2006.

Note P —Income Taxes

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

(Dollars in thousands)	2008	2007	2006
Income before income taxes:			
Domestic	\$ 24,646	\$ 79,545	\$ 34,001
Foreign	1,430	3,160	5,704
Total before income taxes	<u>\$ 26,076</u>	<u>\$ 82,705</u>	<u>\$ 39,705</u>
Income taxes (benefit):			
Current income taxes:			
Domestic	\$ 659	\$ 13,152	\$ 1,159
Foreign	904	968	1,602
Total current	1,563	14,120	2,761
Deferred income taxes:			
Domestic	\$ 6,267	\$ 13,215	\$ 9,259
Foreign	(268)	1,160	(160)
Valuation allowance	157	925	(21,758)
Total deferred	6,156	15,300	(12,659)
Total income taxes (benefit)	<u>\$ 7,719</u>	<u>\$ 29,420</u>	<u>\$ (9,898)</u>

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

	<u>2008</u>	<u>2007</u>	<u>2006</u>
Federal statutory rate	35.0%	35.0%	34.0%
State and local income taxes, net of federal tax effect	2.1	0.9	2.0
Effect of excess of percentage depletion over cost depletion	(5.4)	(1.4)	(2.7)
Manufacturing production deduction	(1.5)	(1.2)	—
Officers' compensation	0.7	1.5	1.0
Adjustment to unrecognized tax benefits	(5.0)	—	—
Extraterritorial income exclusion	—	—	(3.5)
Taxes on foreign source income	0.6	1.0	(1.3)
Valuation allowance	—	—	(54.8)
Other items	<u>3.1</u>	<u>(0.2)</u>	<u>0.4</u>
Effective tax rate (benefit)	<u>29.6%</u>	<u>35.6%</u>	<u>(24.9)%</u>

Included in current domestic income taxes, as shown in the Consolidated Statements of Income, are \$0.8 million, \$1.2 million, and \$1.2 million of state and local income taxes in 2008, 2007 and 2006, respectively.

The Company made domestic and foreign income tax payments of \$8.6 million, \$13.8 million and \$1.8 million in 2008, 2007 and 2006, 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 tax assets and (liabilities) recorded in the Consolidated Balance Sheets consist of the following:

	<u>December 31,</u>	
(Dollars in thousands)	<u>2008</u>	<u>2007</u>
Post-retirement benefits other than pensions	\$ 12,964	\$ 13,633
Alternative minimum tax credit	7,404	9,677
Other reserves	6,927	8,375
Environmental reserves	2,181	1,817
Pensions	15,900	7,721
Derivative instruments and hedging activities	466	622
Net operating loss and credit carryforward	2,934	2,279
Miscellaneous	80	—
	<u>48,856</u>	<u>44,124</u>
Valuation allowance	(1,398)	(1,241)
Total deferred tax assets	<u>47,458</u>	<u>42,883</u>
Depreciation	(26,028)	(28,430)
Amortization	(4,238)	(4,135)
Inventory	(1,602)	(7)
Capitalized interest expense	(440)	(676)
Mine development	(1,170)	(2,475)
Miscellaneous	—	(96)
Total deferred tax liabilities	<u>(33,478)</u>	<u>(35,819)</u>
Net deferred tax asset	<u>\$ 13,980</u>	<u>\$ 7,064</u>

The Company has deferred income tax assets offset with a valuation allowance for state and foreign net operating loss 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, 2008, for income tax purposes, the Company had foreign net operating loss carryforwards totaling \$3.9 million that do not expire, and state net operating loss carryforwards of \$16.9 million that expire in calendar years 2009 through 2025. The Company had state tax credits of \$1.3 million that expire in calendar years 2009 through 2015. The Company had alternative minimum tax credits of \$7.3 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 US federal examinations for years before 2001, state and local examinations for years before 2005, and foreign examinations for tax years before 2002. The Company is presently under examination for the income filings in federal and state jurisdictions.

A reconciliation of the Company's unrecognized tax benefits for the years ending December 31, 2008 and 2007 is as follows:

(Dollars in thousands)	<u>2008</u>	<u>2007</u>
Balance as of January 1	\$ 5,368	\$5,405
Addition to tax positions related to current year	359	7
Reduction to tax positions related to prior years	—	(44)
Lapses on statutes of limitations	(2,251)	—
Balance as of December 31	<u>\$ 3,476</u>	<u>\$5,368</u>

At December 31, 2008, the Company had \$3.7 million of unrecognized tax benefits, of which \$3.0 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 has recorded approximately \$0.2 million of accrued interest and penalties related to uncertain tax positions.

A provision has not been made with respect to \$25.7 million of unremitted foreign earnings at December 31, 2008 because such earnings are 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):

	<u>2008</u>	<u>2007</u>	<u>2006</u>
Numerator for basic and diluted EPS:			
Net income (in thousands)	\$ 18,357	\$ 53,285	\$ 49,603
Denominator:			
Denominator for basic EPS:			
Weighted-average shares outstanding	20,335,000	20,320,000	19,665,000
Effect of dilutive securities:			
Stock options and stock appreciation rights	85,000	240,000	542,000
Restricted stock	29,000	28,000	27,000
Performance restricted shares	94,000	24,000	—
Diluted potential common shares	<u>208,000</u>	<u>292,000</u>	<u>569,000</u>
Denominator for diluted EPS:			
Adjusted weighted-average shares outstanding	<u>20,543,000</u>	<u>20,612,000</u>	<u>20,234,000</u>
Basic EPS	<u>\$ 0.90</u>	<u>\$ 2.62</u>	<u>\$ 2.52</u>
Diluted EPS	<u>\$ 0.89</u>	<u>\$ 2.59</u>	<u>\$ 2.45</u>

Stock appreciation rights with grant prices in excess of the average annual share price totaling 69,000 at December 31, 2008 and options to purchase common stock with exercise prices in excess of the average annual share price totaling 53,000 at December 31, 2006 were excluded from the diluted EPS calculations as their effect would have been anti-dilutive. There were no anti-dilutive shares to be excluded from the diluted earnings per share calculation for 2007.

Note R —Related Party Transactions

The Company had outstanding loans of \$0.1 million with five employees, including one executive officer, at December 31, 2008 and December 31, 2007. 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 — Quarterly Data (Unaudited)

The following tables summarize selected quarterly financial data for the years ended December 31, 2008 and 2007:

(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 profit	37,018	44,848	45,173	25,105	152,144
Percent of sales	16.4%	18.2%	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	

	2007				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Net sales	\$250,314	\$233,563	\$230,928	\$240,904	\$955,709
Gross profit	69,384	41,781	46,273	39,234	196,672
Percent of sales	27.7%	17.9%	20.0%	16.3%	20.6%
Net income	\$ 23,114	\$ 7,939	\$ 9,908	\$ 12,324	\$ 53,285
Net income per share of common stock:					
Basic	1.15	0.39	0.49	0.60	2.62
Diluted	1.12	0.38	0.48	0.60	2.59
Stock price range:					
High	50.45	61.82	53.00	58.74	
Low	30.58	39.70	34.17	33.57	

Lower of cost or market charges reduced gross profit by \$6.0 million in the second quarter 2008 and \$9.2 million in the fourth quarter 2008. In 2007, lower of cost or market charges reduced gross profit by \$4.0 million in the second quarter and \$0.5 million in the fourth quarter.

Sales and gross profit 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, 2008 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, 2008 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

On February 27, 2009, each of the directors of the Company and each of the executive officers, including the named executive officers, of the Company (each an "Indemnitee"), became a party to an indemnification agreement with the Company (the "Indemnification Agreements"). The Indemnification Agreements supplement existing indemnification provisions set forth in the Company's organizational documents and replace the prior indemnification agreements that the Indemnitees had entered into with the Company.

In general, the Indemnification Agreements provide that, subject to the procedures, limitations and exceptions set forth therein, the Company will indemnify the Indemnitee for all expenses, damages, losses, liabilities, judgments, fines, penalties and amounts paid in settlement actually incurred by the Indemnitee in connection with any threatened, asserted, pending or completed claim, demand, action, suit or proceeding resulting from (i) any actual, alleged or suspected act or failure to act by Indemnitee in the Indemnitee's capacity as a director and/or officer of the Company or as a director, officer, employee, member, manager, trustee or agent of another entity as to which Indemnitee is or was serving at the request of the Company, (ii) any actual, alleged or suspected act or failure to act by Indemnitee in respect of any business, transaction, communication, filing, disclosure or other activity in any such capacity in (i) above, or (iii) Indemnitee's status as a current or former director and/or officer of the Company or director or as a director, officer, employee, member, manager, trustee or agent of another entity as to which Indemnitee was serving at the request of the Company. Additionally, the Indemnitee will have the right to advancement by the Company of expenses as they are actually incurred or are reasonably likely to be incurred in connection with defending a claim in advance of the final disposition of a claim. Under the terms of the Indemnification Agreements, an Indemnitee will be entitled to indemnification if the Indemnitee is either successful on the merits or otherwise in defense of any claim or if the Indemnitee has met the applicable standard of conduct under Ohio law that is a legally required condition precedent to indemnification.

The foregoing description of the Indemnification Agreements is qualified in its entirety by reference to the full text of the form of the Indemnification Agreement covering executive officers and the form of the Indemnification Agreement covering directors, which are filed as Exhibit 10a and Exhibit 10b, respectively, to this Annual Report on Form 10-K and which are incorporated herein by reference.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information under “Election of Directors” in the proxy statement for our 2009 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 2009 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 2009 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 website at www.beminc.com, and copies are also available upon request by any shareholder to Secretary, Brush Engineered Materials Inc., 6070 Parkland Blvd., Mayfield Hts., Ohio 44124. We make our reports on Forms 10-K, 10-Q and available on our website, 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 website. The information on our website 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 “2008 Director Compensation” in the proxy statement for our 2009 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 2009 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>	<u>Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)</u>	<u>Weighted-average Exercise Price of Outstanding Options, Warrants and Rights</u>	<u>Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))</u>
Equity compensation plans approved by security holders	810,032 ⁽¹⁾	\$ 20.28 ⁽²⁾	1,189,806 ⁽³⁾
Equity compensation plans not approved by security holders	—		—
Total	810,032	\$ 20.28	1,189,806

⁽¹⁾ Consists of options awarded under the 1979, 1984, 1989, 1995 and 2006 Stock Incentive Plans, the 1990 and 1997 Non-employee Director Stock Incentive Plans and the 2006 Non-employee Director Equity Plan. This amount includes 122,692 restricted shares, 12,582 restricted stock units and 139,264 performance restricted shares at the target level. In addition, up to 69,616 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, 2008. 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 — Board Independence” of the proxy statement for our 2009 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 2009 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, 2008, 2007 and 2006 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.
- (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.
- (10a)*# Form of Indemnification Agreement entered into by the Company and its executive officers.
- (10b)*# Form of Indemnification Agreement entered into by the Company and its directors.
- (10c)* Amended and Restated Form of Severance Agreement for Executive Officers (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.
- (10d)* Amended and Restated Form of Severance Agreement for Key Employees (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.
- (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)* 2008 Management Performance Compensation Plan (filed as Exhibit 10.1 to the Current Report on Form 8-K filed by the Company on February 12, 2008), incorporated herein by reference.
- (10h)*# 2009 Management Performance Compensation Plan.
- (10i)* Long-term Incentive Plan for the performance period January 1, 2006 through December 31, 2008 (filed as Exhibit 10m to the Company's Annual Report on Form 10-K for the year ended December 31, 2007), incorporated herein by reference.
- (10j)* 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.
- (10k)* 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.
- (10l)* 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.
- (10m)* 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.
- (10n)* 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.
- (10o)* 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.
- (10p)* 1989 Stock Option Plan (filed as Exhibit 4.5 to Registration Statement on Form S-8, Registration No. 33-28605), incorporated herein by reference.
- (10q)* 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.
- (10r)* 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.

(10s)*	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.
(10t)*	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.
(10u)*	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.
(10v)*	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.
(10w)*	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.
(10x)*	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.
(10y)*	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.
(10z)*#	Form of 2009 Restricted Stock Agreement.
(10aa)*	Form of 2006 Performance Restricted Share and Performance Share Agreement (filed as Exhibit 10.2 to Amendment No. 1 to the Current Report on Form 8-K filed by the Company on May 8, 2006), incorporated herein by reference.
(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.
(10ah)*	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.
(10ai)*	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.
(10aj)*	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.
(10ak)*	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.
(10al)*	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.
(10am)*	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.
(10an)*	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.

(10ao)*	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.
(10ap)*	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.
(10aq)*	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.
(10ar)*	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.
(10as)*	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.
(10at)*	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.
(10au)*	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.
(10av)*	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.
(10aw)*	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.
(10ax)*	2000 Reorganization Amendment, dated May 16, 2000, to the 1992 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.
(10ay)*	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.
(10az)*	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.
(10ba)*	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.
(10bb)*#	Amendment No. 4 (effective April 1, 2009) to the 1992 Deferred Compensation Plan for Non-employee Directors.
(10bc)*	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.
(10bd)*	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.
(10be)*	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.
(10bf)*#	Amendment No. 1 to the Amended and Restated Executive Deferred Compensation Plan II.
(10bg)*	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.

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(10bh)*	Trust Agreement between the Company and Fifth Third, dated March 10, 2005 relating to the 2005 Executive Deferred Compensation Plan II (filed as Exhibit 10ww to the Company's Annual Report on Form 10-K for the year ended December 31, 2004), incorporated herein by reference.
(10bi)*	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.
(10bj)	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.
(10bk)	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.
(10bl)	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.
(10bm)	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.
(10bn)	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.
(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
Sr. Vice President Finance
and Chief Financial Officer

February 27, 2009

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.

<u>/s/ RICHARD J. HIPPLE</u> Richard J. Hipple	Chairman of the Board, President, Chief Executive Officer and Director (Principal Executive Officer)	February 27, 2009
<u>/s/ JOHN D. GRAMPA</u> John D. Grampa	Sr. Vice President Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	February 27, 2009
<u>/s/ ALBERT C. BERSTICKER*</u> Albert C. Bersticker*	Director	February 27, 2009
<u>/s/ JOSEPH P. KEITHLEY*</u> Joseph P. Keithley*	Director	February 27, 2009
<u>/s/ VINOD M. KHLNANI*</u> Vinod M. Khilnani*	Director	February 27, 2009
<u>/s/ WILLIAM B. LAWRENCE*</u> William B. Lawrence*	Director	February 27, 2009
<u>/s/ WILLIAM P. MADAR*</u> William P. Madar*	Director	February 27, 2009
<u>/s/ WILLIAM G. PRYOR*</u> William G. Pryor*	Director	February 27, 2009
<u>/s/ N. MOHAN REDDY*</u> N. Mohan Reddy*	Director	February 27, 2009
<u>/s/ WILLIAM R. ROBERTSON*</u> William R. Robertson*	Director	February 27, 2009
<u>/s/ JOHN SHERWIN, JR.*</u> John Sherwin, Jr.*	Director	February 27, 2009
<u>/s/ CRAIG S. SHULAR*</u> Craig S. Shular*	Director	February 27, 2009

*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

February 27, 2009



SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS**BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES****Years ended December 31, 2008, 2007 and 2006**

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) Charged to Costs and Expenses	(2) Charged to Other Accounts-Describe		
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
Year ended December 31, 2006					
Deducted from asset accounts:					
Allowance for doubtful accounts receivable	\$ 1,315,000	\$ 856,000	\$ 0	\$ 349,000(B)	\$ 1,822,000
Inventory reserves and obsolescence	\$ 2,711,000	\$ 1,348,000	\$ 1,554,000(A)	\$1,158,000(C)	\$ 4,455,000
Note (A) — Beginning balance from acquisition					
Note (B) — Bad debts written-off, net of recoveries					
Note (C) — Inventory write-off					

OFFICER INDEMNIFICATION AGREEMENT

This Officer Indemnification Agreement, dated as of _____, **2009** (this “*Agreement*”), is made by and between Brush Engineered Materials Inc., an Ohio corporation (the “*Company*”), and _____ (“*Indemnitee*”), who is an officer of the Company.

RECITALS :

A. It is critically important to the Company and its shareholders that the Company be able to attract and retain the most capable persons reasonably available to serve as officers of the Company.

B. In recognition of the need for corporations to be able to induce capable and responsible persons to accept positions in corporate management, Ohio Revised Code (“ORC”) §1701.13(E) authorizes (and in some instances requires) corporations to indemnify their officers, authorizes (and sometimes requires) corporations to advance funds to pay for expenses of its officers prior to the final disposition of an action, suit or proceeding, and further authorizes corporations to purchase and maintain insurance for the benefit of their officers.

C. Indemnification by a corporation serves the policies of (1) allowing officers to resist unjustified lawsuits, secure in the knowledge that, if vindicated, the corporation will bear the expense of litigation; (2) encouraging capable women and men to serve as corporate officers, secure in the knowledge that the corporation will absorb the costs of defending their honesty and integrity; and (3) allowing officers and corporations to dispose of vexacious and distracting litigation through negotiation of settlements.

D. The number of lawsuits challenging the judgment and actions of corporate officers, the costs of defending those lawsuits, and the threat to officers’ personal assets have all materially increased over the past several years, chilling the willingness of capable women and men to undertake the responsibilities imposed on corporate officers.

E. Federal legislation and rules adopted by the Securities and Exchange Commission and the national securities exchanges have imposed additional disclosure and corporate governance obligations on officers of public companies and have exposed such officers to additional and substantially broadened civil liabilities.

F. These legislative and regulatory initiatives have also exposed officers of public companies to a significantly greater risk of criminal proceedings, with attendant defense costs and potential criminal fines and penalties.

G. Indemnitee is an officer of the Company and Indemnitee’s willingness to continue to serve in such capacity is predicated, in substantial part, upon the Company’s willingness to indemnify Indemnitee in accordance with the principles reflected above, to the fullest extent permitted by the laws of the state of Ohio, and upon the other undertakings set forth in this Agreement.

H. Section 34 of the Company's Amended and Restated Code of Regulations (the "Regulations") require the Company to indemnify each officer and former officer of the Company to the full extent then permitted by law. However, recent court decisions in Delaware, while not binding on the courts of Ohio interpreting Ohio law, have raised questions as to the ability of officers generally to rely on such provisions following their retirement or other departure from the board in the event that there is a subsequent amendment to the [Regulations][Articles] that alters or eliminates the indemnification provisions of those documents.

I. Section 36 of the Company's Regulations provides that the Company, with the approval of the Board of Directors may enter into agreements with any persons that the Company may indemnify under the Regulations, and undertake thereby to indemnify such persons and to pay the expenses incurred by them in defending any action, suit or proceeding against them, whether or not the Company would have power under the law or the Articles to indemnify such person.

J. Therefore, in recognition of the need to provide Indemnitee with contractual protection against personal liability, in order to procure Indemnitee's continued service as an officer of the Company and to enhance Indemnitee's ability to serve the Company in an effective manner, and in order to provide such protection pursuant to express contract rights (intended to be enforceable irrespective of, among other things, any amendment to the Company's Amended and Restated Articles of Incorporation or the Regulations (collectively, the "**Constituent Documents**"), any change in the composition of the Company's Board of Directors (the "**Board**") or any change-in-control or business combination transaction relating to the Company), or any change in the officer's status through retirement or resignation, the Company wishes to provide in this Agreement for the indemnification of and the advancement of Expenses (as defined in Section 1(e)) to Indemnitee as set forth in this Agreement and for the continued coverage of Indemnitee under the Company's directors' and officers' liability insurance policies.

K. In light of the considerations referred to in the preceding recitals, it is the Company's intention and desire that the provisions of this Agreement be construed liberally, subject to their express terms, to maximize the protections to be provided to Indemnitee hereunder.

AGREEMENT :

NOW, THEREFORE, the parties hereby agree as follows:

1. Certain Definitions. In addition to terms defined elsewhere herein, the following terms have the following meanings when used in this Agreement with initial capital letters:

(a) "**Change in Control**" means the occurrence after the date of this Agreement of any of the following events:

(i) the acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act) (a "**Person**") of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 20% or more of the combined voting power of the then-outstanding Voting Stock of the Company; *provided , however , that:*

(A) for purposes of this Section 1(a)(i), the following acquisitions will not constitute a Change in Control: (1) any acquisition of Voting Stock of the Company directly from the Company that is approved by a majority of the Incumbent Directors, (2) any acquisition of Voting Stock of the Company by the Company or any Subsidiary, (3) any acquisition of Voting Stock of the Company by any employee benefit plan (or related trust) sponsored or maintained by the Company or any Subsidiary, and (4) any acquisition of Voting Stock of the Company by any Person pursuant to a Business Combination that complies with clauses (A), (B) and (C) of Section 1(a)(iii) below;

(B) if any Person acquires beneficial ownership of 20% or more of combined voting power of the then-outstanding Voting Stock of the Company as a result of a transaction described in clause (A)(1) of Section 1(a)(i) and such Person thereafter becomes the beneficial owner of any additional shares of Voting Stock of the Company representing 1% or more of the then-outstanding Voting Stock of the Company, other than in an acquisition directly from the Company that is approved by a majority of the Incumbent Directors or other than as a result of a stock dividend, stock split or similar transaction effected by the Company in which all holders of Voting Stock are treated equally, such subsequent acquisition will be deemed to constitute a Change in Control;

(C) a Change in Control will not be deemed to have occurred if a Person acquires beneficial ownership of 20% or more of the Voting Stock of the Company as a result of a reduction in the number of shares of Voting Stock of the Company outstanding unless and until such Person thereafter becomes the beneficial owner of any additional shares of Voting Stock of the Company representing 1% or more of the then-outstanding Voting Stock of the Company, other than in an acquisition directly from the Company that is approved by a majority of the Incumbent Directors or other than as a result of a stock dividend, stock split or similar transaction effected by the Company in which all holders of Voting Stock are treated equally; and

(D) if at least a majority of the Incumbent Directors determine in good faith that a Person has acquired beneficial ownership of 20% or more of the Voting Stock of the Company inadvertently, and such Person divests as promptly as practicable a sufficient number of shares so that such Person beneficially owns less than 20% of the Voting Stock of the Company, then no Change in Control will have occurred as a result of such Person's acquisition; or

(ii) a majority of the Directors are not Incumbent Directors; 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 Company or the acquisition of assets of another corporation, or other transaction (each, a ***“Business Combination”***), unless, in each case, immediately following such Business Combination (A) all or substantially all of the individuals and entities who were the beneficial owners of Voting Stock of the Company immediately prior to such Business Combination beneficially own, directly or indirectly, more than 60% of the combined voting power of the then outstanding shares of Voting Stock of the entity resulting from such Business Combination (including, without limitation, an entity which as a result of such transaction owns the Company or all or substantially all of the Company's assets either directly or through one or more subsidiaries), (B) no Person (other than the

Company, such entity resulting from such Business Combination, or any employee benefit plan (or related trust) sponsored or maintained by the Company, any Subsidiary or such entity resulting from such Business Combination or a holding company as described in ORC §1701.802 (A)) beneficially owns, directly or indirectly, 20% or more of the combined voting power of the then outstanding shares of Voting Stock of the entity resulting from such Business Combination, and (C) at least a majority of the members of the Board of Directors of the entity resulting from such Business Combination were Incumbent Directors 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 Company of a complete liquidation or dissolution of the Company, except pursuant to a Business Combination that complies with clauses (A), (B) and (C) of Section 1(a)(iii).

For purposes of this Section 1(a) and as used elsewhere in this Agreement, the following terms have the following meanings:

(A) “**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

(B) “**Incumbent Directors**” means the individuals who, as of the date hereof, are Directors of the Company and any individual becoming a Director subsequent to the date hereof whose election, nomination for election by the Company’s shareholders, or appointment, was approved by a vote of at least two-thirds of the then Incumbent Directors (either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for director, without objection to such nomination); *provided, however*, that an individual will not be an Incumbent Director if such individual’s election or appointment to the Board occurs as a result of an actual or threatened election contest (as described in Rule 14a-12(c) of the Exchange Act) 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.

(C) “**Subsidiary**” means an entity in which the Company or any holding company as described in ORC §1701.802(A) directly or indirectly beneficially owns 50% or more of the outstanding Voting Stock.

(D) “**Voting Stock**” means securities entitled to vote generally in the election of directors (or similar governing bodies).

(b) “**Claim**” means (i) any threatened, asserted, pending or completed claim, demand, action, suit or proceeding, whether civil, criminal, administrative, arbitrative, investigative or other, and whether made pursuant to federal, state or other law; and (ii) any threatened, pending or completed inquiry or investigation, whether made, instituted or conducted by the Company or any other person, including without limitation any federal, state or other governmental entity, that Indemnitee determines might lead to the institution of any such claim, demand, action, suit or proceeding.

(c) “**Controlled Affiliate**” means any corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, whether or not for profit, that is

directly or indirectly controlled by the Company. For purposes of this definition, “control” means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of an entity or enterprise, whether through the ownership of voting securities, through other voting rights, by contract or otherwise; *provided* that direct or indirect beneficial ownership of capital stock or other interests in an entity or enterprise entitling the holder to cast 20% or more of the total number of votes generally entitled to be cast in the election of directors (or persons performing comparable functions) of such entity or enterprise will be deemed to constitute control for purposes of this definition.

(d) “**Disinterested Director**” means a director of the Company who is not and was not a party to the Claim in respect of which indemnification is sought by Indemnitee.

(e) “**Expenses**” means attorneys’ and experts’ fees and expenses and all other costs and expenses paid or payable in connection with investigating, defending, being a witness in or otherwise participating in (including on appeal), or preparing to investigate, defend, be a witness in or otherwise participate in (including on appeal), any Claim, and any amounts paid in settlement prior to a final, nonappealable judgment or conviction.

(f) “**Indemnifiable Claim**” means any Claim based upon, arising out of or resulting from (i) any actual, alleged or suspected act or failure to act by Indemnitee in his or her capacity as a director, officer, employee or agent of the Company or as a director, officer, employee, member, manager, trustee or agent of any other corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, whether or not for profit, as to which Indemnitee is or was serving at the request of the Company as a director, officer, employee, member, manager, trustee or agent, (ii) any actual, alleged or suspected act or failure to act by Indemnitee in respect of any business, transaction, communication, filing, disclosure or other activity of the Company or any other entity or enterprise referred to in clause (i) of this sentence, or (iii) Indemnitee’s status as a current or former director, officer, employee or agent of the Company or as a current or former director, officer, employee, member, manager, trustee or agent of the Company or any other entity or enterprise referred to in clause (i) of this sentence or any actual, alleged or suspected act or failure to act by Indemnitee in connection with any obligation or restriction imposed upon Indemnitee by reason of such status. In addition to any service at the actual request of the Company, for purposes of this Agreement, Indemnitee will be deemed to be serving or to have served at the request of the Company as a director, officer, employee, member, manager, trustee or agent of another entity or enterprise if Indemnitee is or was serving as a director, officer, employee, member, manager, trustee or agent of such entity or enterprise and (i) such entity or enterprise is or at the time of such service was a Controlled Affiliate, (ii) such entity or enterprise is or at the time of such service was an employee benefit plan (or related trust) sponsored or maintained by the Company or a Controlled Affiliate, or (iii) the Company or a Controlled Affiliate directly or indirectly caused or authorized Indemnitee to be nominated, elected, appointed, designated, employed, engaged or selected to serve in such capacity.

(g) “**Indemnifiable Losses**” means any and all Losses relating to, arising out of or resulting from any Indemnifiable Claim.

(h) “**Independent Counsel**” means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five years has

been, retained to represent: (i) the Company (or any Subsidiary) or Indemnatee in any matter material to either such party (other than with respect to matters concerning the Indemnatee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other named (or, as to a threatened matter, reasonably likely to be named) party to the Indemnifiable Claim giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" will not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnatee in an action to determine Indemnatee's rights under this Agreement.

(i) "**Losses**" means any and all Expenses, damages, losses, liabilities, judgments, fines, penalties (whether civil, criminal or other) and amounts paid in settlement following a final, nonappealable judgment or conviction, including without limitation all interest, assessments and other charges paid or payable in connection with or in respect of any of the foregoing.

2. Indemnification Obligation. Subject to Section 7, the Company shall indemnify, defend and hold harmless Indemnatee, to the fullest extent permitted or required by the laws of the State of Ohio in effect on the date hereof or as such laws may from time to time hereafter be amended to increase the scope of such permitted indemnification, against any and all Indemnifiable Claims and Indemnifiable Losses; *provided, however*, that, except as provided in Sections 4 and 20, Indemnatee will not be entitled to indemnification pursuant to this Agreement in connection with any Claim initiated by Indemnatee against the Company or any director or officer of the Company unless the Company has joined in or consented to the initiation of such Claim.

3. Advancement of Expenses. Indemnatee will have the right to advancement by the Company prior to the final disposition of any Indemnifiable Claim of any and all Expenses relating to, arising out of or resulting from any Indemnifiable Claim paid or incurred by Indemnatee or which Indemnatee determines are reasonably likely to be paid or incurred by Indemnatee. Indemnatee's right to such advancement is not subject to the satisfaction of any standard of conduct. Without limiting the generality or effect of the foregoing, within five business days after any request by Indemnatee, the Company shall, in accordance with such request (but without duplication), (a) pay such Expenses on behalf of Indemnatee, (b) advance to Indemnatee funds in an amount sufficient to pay such Expenses, or (c) reimburse Indemnatee for such Expenses; *provided* that Indemnatee shall repay, without interest any amounts actually advanced to Indemnatee that, at the final disposition of the Indemnifiable Claim to which the advance related, were in excess of amounts paid or payable by Indemnatee in respect of Expenses relating to, arising out of or resulting from such Indemnifiable Claim. For purposes of obtaining payments of Expenses in advance of final disposition, the Indemnatee shall submit to the Company a sworn request for advancement of Expenses substantially in the form of Exhibit A attached hereto and made a part hereof (subject to Indemnatee filling in the blanks therein and selecting from among the bracketed alternatives therein, the "**Undertaking**"), averring that the Indemnatee has reasonably incurred or will reasonably incur actual Expenses in defending an Indemnifiable Claim. The Undertaking need not be secured and the Company must accept the Undertaking without reference to Indemnatee's ability to repay the Expenses. In no event will Indemnatee's right to the payment, advancement or reimbursement of Expenses pursuant to this

Section 3 be conditioned upon any undertaking that is less favorable to Indemnatee than, or that is in addition to, the undertakings set forth in Exhibit A.

4. Indemnification for Additional Expenses. Without limiting the generality or effect of the foregoing, the Company shall indemnify and hold harmless Indemnatee against and, if requested by Indemnatee, shall reimburse Indemnatee for, or advance to Indemnatee, within five business days of such request, any and all Expenses paid or incurred by Indemnatee or which Indemnatee determines are reasonably likely to be paid or incurred by Indemnatee in connection with any Claim made, instituted or conducted by Indemnatee for (a) indemnification or payment, advancement or reimbursement of Expenses by the Company under any provision of this Agreement, or under any other agreement or provision of the Constituent Documents now or hereafter in effect relating to Indemnifiable Claims, and/or (b) recovery under any directors' and officers' liability insurance policies maintained by the Company, regardless in each case of whether Indemnatee ultimately is determined to be entitled to such indemnification, reimbursement, advance or insurance recovery, as the case may be; *provided, however*, that Indemnatee shall return, without interest, any such advance of Expenses (or portion thereof) which remains unspent at the final disposition of the Claim to which the advance related.

5. Partial Indemnity. If Indemnatee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any Indemnifiable Loss, but not for all of the total amount thereof, the Company shall nevertheless indemnify Indemnatee for the portion thereof to which Indemnatee is entitled.

6. Procedure for Notification . To obtain indemnification under this Agreement in respect of an Indemnifiable Claim or Indemnifiable Loss, Indemnatee shall submit to the Company a written request, including a brief description (based upon information then available to Indemnatee) of such Indemnifiable Claim or Indemnifiable Loss. If, at the time of the receipt of such request, the Company has directors' and officers' liability insurance in effect under which coverage for such Indemnifiable Claim or Indemnifiable Loss is potentially available, the Company shall give prompt written notice of such Indemnifiable Claim or Indemnifiable Loss to the applicable insurers in accordance with the procedures set forth in the applicable policies. The Company shall provide to Indemnatee a copy of such notice delivered to the applicable insurers, and copies of all subsequent correspondence between the Company and such insurers regarding the Indemnifiable Claim or Indemnifiable Loss, in each case substantially concurrently with the delivery or receipt thereof by the Company. The failure by Indemnatee to timely notify the Company of any Indemnifiable Claim or Indemnifiable Loss will not relieve the Company from any liability hereunder unless, and only to the extent that, the Company did not otherwise learn of such Indemnifiable Claim or Indemnifiable Loss and such failure results in forfeiture by the Company of substantial defenses, rights or insurance coverage.

7. Determination of Right to Indemnification .

(a) To the extent that Indemnatee shall have been successful on the merits or otherwise in defense of any Indemnifiable Claim or any portion thereof or in defense of any issue or matter therein, including without limitation through a dismissal without prejudice, Indemnatee shall be indemnified against all Indemnifiable Losses relating to, arising out of or resulting from such Indemnifiable Claim in accordance with Section 2 and no Standard of Conduct Determination (as defined in Section 7(b)) will be required. In the event that a matter as to

which there has been a dismissal without prejudice is later revived in the same or similar form, that matter will be treated as a new Claim for all purposes of this Agreement.

(b) To the extent that the provisions of Section 7(a) are inapplicable to an Indemnifiable Claim that will have been finally disposed of, any determination of whether Indemnitee has satisfied any applicable standard of conduct under Ohio law that is a legally required condition precedent to indemnification of Indemnitee hereunder against Indemnifiable Losses relating to, arising out of or resulting from such Indemnifiable Claim (a “ **Standard of Conduct Determination** ”) will be made as follows: (i) if a Change in Control shall not have occurred, or if a Change in Control shall have occurred but Indemnitee shall have requested that the Standard of Conduct Determination be made pursuant to this clause (i), (A) by a majority vote of a quorum consisting of the Disinterested Directors, (B) if such Disinterested Directors so direct, by a majority vote of a committee of Disinterested Directors designated by a majority vote of all Disinterested Directors, or (C) if such quorum of Disinterested Directors is not available or if a majority of such a quorum so direct, by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnitee; and (ii) if a Change in Control shall have occurred and Indemnitee shall not have requested that the Standard of Conduct Determination be made pursuant to clause (i), by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnitee. Indemnitee will cooperate with the person or persons making such Standard of Conduct Determination, including providing to such person or persons, upon reasonable advance request, any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. The Company shall indemnify and hold harmless Indemnitee against and, if requested by Indemnitee, shall reimburse Indemnitee for, or advance to Indemnitee, within five business days of such request, any and all costs and expenses (including attorneys’ and experts’ fees and expenses) incurred by Indemnitee in so cooperating with the person or persons making such Standard of Conduct Determination.

(c) The Company shall use its reasonable best efforts to cause any Standard of Conduct Determination required under Section 7(b) to be made as promptly as practicable. If (i) the person or persons empowered or selected under Section 7 to make the Standard of Conduct Determination shall not have made a determination within 30 days after the later of (A) receipt by the Company of written notice from Indemnitee advising the Company of the final disposition of the applicable Indemnifiable Claim (the date of such receipt being the “ **Notification Date** ”) and (B) the selection of an Independent Counsel, if such determination is to be made by Independent Counsel, that is permitted under the provisions of Section 7(e) to make such determination and (ii) Indemnitee shall have fulfilled his/her obligations set forth in the second sentence of Section 7(b), then Indemnitee shall be deemed to have satisfied the applicable standard of conduct; *provided* that such 30-day period may be extended for a reasonable time, not to exceed an additional 30 days, if the person or persons making such determination in good faith requires such additional time for the obtaining or evaluation or documentation and/or information relating thereto.

(d) If (i) Indemnitee shall be entitled to indemnification hereunder against any Indemnifiable Losses pursuant to Section 7(a), (ii) no determination of whether Indemnitee has satisfied any applicable standard of conduct under Ohio law is a legally required condition precedent to indemnification of Indemnitee hereunder against any Indemnifiable Losses, or

(iii) Indemnitee has been determined or deemed pursuant to Section 7(b) or (c) to have satisfied any applicable standard of conduct under Ohio law which is a legally required condition precedent to indemnification of Indemnitee hereunder against any Indemnifiable Losses, then the Company shall pay to Indemnitee, within five business days after the later of (x) the Notification Date in respect of the Indemnifiable Claim or portion thereof to which such Indemnifiable Losses are related, out of which such Indemnifiable Losses arose or from which such Indemnifiable Losses resulted and (y) the earliest date on which the applicable criterion specified in clause (i), (ii) or (iii) above shall have been satisfied, an amount equal to the amount of such Indemnifiable Losses.

(e) If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 7(b)(i), the Independent Counsel shall be selected by the Board of Directors, and the Company shall give written notice to Indemnitee advising him or her of the identity of the Independent Counsel so selected. If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 7(b)(ii), the Independent Counsel shall be selected by Indemnitee, and Indemnitee shall give written notice to the Company advising it of the identity of the Independent Counsel so selected. In either case, Indemnitee or the Company, as applicable, may, within five business days after receiving written notice of selection from the other, deliver to the other a written objection to such selection; *provided, however*, that such objection may be asserted only on the ground that the Independent Counsel so selected does not satisfy the criteria set forth in the definition of “Independent Counsel” in Section 1(h), and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person or firm so selected will act as Independent Counsel. If such written objection is properly and timely made and substantiated, (i) the Independent Counsel so selected may not serve as Independent Counsel unless and until such objection is withdrawn or a court has determined that such objection is without merit and (ii) the non-objecting party may, at its option, select an alternative Independent Counsel and give written notice to the other party advising such other party of the identity of the alternative Independent Counsel so selected, in which case the provisions of the two immediately preceding sentences and clause (i) of this sentence shall apply to such subsequent selection and notice. If applicable, the provisions of clause (ii) of the immediately preceding sentence shall apply to successive alternative selections. If no Independent Counsel that is permitted under the foregoing provisions of this Section 7(e) to make the Standard of Conduct Determination shall have been selected within 30 days after the Company gives its initial notice pursuant to the first sentence of this Section 7(e) or Indemnitee gives its initial notice pursuant to the second sentence of this Section 7(e), as the case may be, either the Company or Indemnitee may petition the Federal or state courts of Ohio for resolution of any objection which shall have been made by the Company or Indemnitee to the other’s selection of Independent Counsel and/or for the appointment as Independent Counsel of a person or firm selected by the court or by such other person as the court shall designate, and the person or firm with respect to whom all objections are so resolved or the person or firm so appointed will act as Independent Counsel. In all events, the Company shall pay all of the reasonable fees and expenses of the Independent Counsel incurred in connection with the Independent Counsel’s determination pursuant to Section 7(b).

8. Presumption of Entitlement. In making any Standard of Conduct Determination, the person or persons making such determination shall presume that Indemnitee has satisfied the applicable standard of conduct, and the Company may overcome such presumption only by its adducing clear and convincing evidence to the contrary. Any Standard of Conduct

Determination that is adverse to Indemnatee may be challenged by the Indemnatee in the state or Federal courts in Ohio. No determination by the Company (including by its directors or any Independent Counsel) that Indemnatee has not satisfied any applicable standard of conduct shall be a defense to any Claim by Indemnatee for indemnification or reimbursement or advance payment of Expenses by the Company hereunder or create a presumption that Indemnatee has not met any applicable standard of conduct.

9. No Other Presumption. For purposes of this Agreement, the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of *nolo contendere* or its equivalent, will not create a presumption that Indemnatee did not meet any applicable standard of conduct or that indemnification hereunder is otherwise not permitted.

10. Non-Exclusivity. The rights of Indemnatee hereunder will be in addition to any other rights Indemnatee may have under the Constituent Documents, or the substantive laws of the Company's jurisdiction of incorporation, any other contract or otherwise (collectively, "**Other Indemnity Provisions**"); *provided, however*, that (a) to the extent that Indemnatee otherwise would have any greater right to indemnification under any Other Indemnity Provision, Indemnatee will be deemed to have such greater right hereunder and (b) to the extent that any change is made to any Other Indemnity Provision which permits any greater right to indemnification than that provided under this Agreement as of the date hereof, Indemnatee will be deemed to have such greater right hereunder. The Company will not adopt any amendment to any of the Constituent Documents the effect of which would be to deny, diminish or encumber Indemnatee's right to indemnification under this Agreement or any Other Indemnity Provision.

11. Liability Insurance and Funding. For the duration of Indemnatee's service as an officer of the Company, and thereafter for so long as Indemnatee shall be subject to any pending or possible Indemnifiable Claim, the Company shall use commercially reasonable efforts (taking into account the scope and amount of coverage available relative to the cost thereof) to cause to be maintained in effect policies of directors' and officers' liability insurance providing coverage for directors and/or officers of the Company that is at least substantially comparable in scope and amount to that provided by the Company's current policies of directors' and officers' liability insurance. The Company shall provide Indemnatee with a copy of all directors' and officers' liability insurance applications, binders, policies, declarations, endorsements and other related materials, and shall provide Indemnatee with a reasonable opportunity to review and comment on the same. Without limiting the generality or effect of the two immediately preceding sentences, the Company shall not discontinue or significantly reduce the scope or amount of coverage from one policy period to the next (i) without the prior approval thereof by a majority vote of the Incumbent Directors, even if less than a quorum, or (ii) if at the time that any such discontinuation or significant reduction in the scope or amount of coverage is proposed there are no Incumbent Directors, without the prior written consent of Indemnatee (which consent shall not be unreasonably withheld or delayed). In all policies of directors' and officers' liability insurance obtained by the Company, Indemnatee shall be named as an insured in such a manner as to provide Indemnatee the same rights and benefits, subject to the same limitations, as are accorded to the Company's directors and officers most favorably insured by such policy. The Company may, but shall not be required to, create a trust fund, grant a security interest or use other means, including without limitation a letter of credit, to ensure the payment of such

amounts as may be necessary to satisfy its obligations to indemnify and advance expenses pursuant to this Agreement.

12. Subrogation. In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the related rights of recovery of Indemnatee against other persons or entities (other than Indemnatee's successors), including any entity or enterprise referred to in clause (i) of the definition of "Indemnifiable Claim" in Section 1(f). Indemnatee shall execute all papers reasonably required to evidence such rights (all of Indemnatee's reasonable Expenses, including attorneys' fees and charges, related thereto to be reimbursed by or, at the option of Indemnatee, advanced by the Company).

13. No Duplication of Payments. The Company shall not be liable under this Agreement to make any payment to Indemnatee in respect of any Indemnifiable Losses to the extent Indemnatee has otherwise actually received payment (net of Expenses incurred in connection therewith) under any insurance policy, the Constituent Documents and Other Indemnity Provisions or otherwise (including from any entity or enterprise referred to in clause (i) of the definition of "Indemnifiable Claim" in Section 1(f)) in respect of such Indemnifiable Losses otherwise indemnifiable hereunder.

14. Defense of Claims. The Company shall be entitled to participate in the defense of any Indemnifiable Claim or to assume the defense thereof, with counsel reasonably satisfactory to the Indemnatee; *provided* that if Indemnatee believes, after consultation with counsel selected by Indemnatee, that (a) the use of counsel chosen by the Company to represent Indemnatee would present such counsel with an actual or potential conflict, (b) the named parties in any such Indemnifiable Claim (including any impleaded parties) include both the Company and Indemnatee and Indemnatee shall conclude that there may be one or more legal defenses available to Indemnatee that are different from or in addition to those available to the Company, or (c) any such representation by such counsel would be precluded under the applicable standards of professional conduct then prevailing, then Indemnatee shall be entitled to retain separate counsel (but not more than one law firm plus, if applicable, local counsel in respect of any particular Indemnifiable Claim) at the Company's expense. The Company shall not be liable to Indemnatee under this Agreement for any amounts paid in settlement of any threatened or pending Indemnifiable Claim effected without the Company's prior written consent. The Company shall not, without the prior written consent of the Indemnatee, effect any settlement of any threatened or pending Indemnifiable Claim to which the Indemnatee is, or could have been, a party unless such settlement solely involves the payment of money and includes a complete and unconditional release of the Indemnatee from all liability on any claims that are the subject matter of such Indemnifiable Claim. Neither the Company nor Indemnatee shall unreasonably withhold its consent to any proposed settlement; *provided* that Indemnatee may withhold consent to any settlement that does not provide a complete and unconditional release of Indemnatee.

15. Successors and Binding Agreement. (a) The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation, reorganization or otherwise, and including any holding company as described in ORC 1701.802(A)) to all or substantially all of the business or assets of the Company, by agreement in form and substance satisfactory to Indemnatee and his or her counsel, expressly to assume and agree to perform this Agreement in the same manner and to the same extent the Company would be required to perform if no such succession had taken place. This Agreement shall be binding upon and inure to the benefit of the

Company and any successor to the Company, including without limitation any person acquiring directly or indirectly all or substantially all of the business or assets of the Company whether by purchase, merger, consolidation, reorganization or otherwise, and including any holding company as described in ORC 1701.802(A) (and such successor will thereafter be deemed the “ **Company** ” for purposes of this Agreement), but shall not otherwise be assignable or delegatable by the Company.

(b) This Agreement shall inure to the benefit of and be enforceable by the Indemnitee’s personal or legal representatives, executors, administrators, heirs, distributees, legatees and other successors.

(c) This Agreement is personal in nature and neither of the parties hereto shall, without the consent of the other, assign or delegate this Agreement or any rights or obligations hereunder except as expressly provided in Sections 15(a) and 15(b). Without limiting the generality or effect of the foregoing, Indemnitee’s right to receive payments hereunder shall not be assignable, whether by pledge, creation of a security interest or otherwise, other than by a transfer by the Indemnitee’s will or by the laws of descent and distribution, and, in the event of any attempted assignment or transfer contrary to this Section 15(c), the Company will have no liability to pay any amount so attempted to be assigned or transferred.

16. Notices. For all purposes of this Agreement, all communications, including without limitation notices, consents, requests or approvals, required or permitted to be given hereunder shall be in writing and shall be deemed to have been duly given when hand delivered or dispatched by electronic facsimile or electronic mail transmission (with receipt thereof confirmed orally or electronically), or five business days after having been mailed by United States registered or certified mail, return receipt requested, postage prepaid or one business day after having been sent for next-day delivery by a nationally recognized overnight courier service, addressed to the Company (to the attention of the Secretary of the Company) and to Indemnitee at the applicable address shown on the signature page hereto, or to such other address as any party may have furnished to the other in writing and in accordance herewith, except that notices of changes of address will be effective only upon receipt.

17. Governing Law. The validity, interpretation, construction and performance of this Agreement shall be governed by and construed in accordance with the substantive laws of the State of Ohio, without giving effect to the principles of conflict of laws of such State. The Company and Indemnitee each hereby irrevocably consent to the jurisdiction of the state and Federal courts in Ohio for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement and agree that any action instituted under this Agreement shall be brought only in the state or Federal courts in Ohio.

18. Validity. If any provision of this Agreement or the application of any provision hereof to any person or circumstance is held invalid, unenforceable or otherwise illegal, the remainder of this Agreement and the application of such provision to any other person or circumstance shall not be affected, and the provision so held to be invalid, unenforceable or otherwise illegal shall be reformed to the extent, and only to the extent, necessary to make it enforceable, valid or legal. In the event that any court or other adjudicative body shall decline to reform any provision of this Agreement held to be invalid, unenforceable or otherwise illegal as contemplated by the immediately preceding sentence, the parties thereto shall take all such action

as may be necessary or appropriate to replace the provision so held to be invalid, unenforceable or otherwise illegal with one or more alternative provisions that effectuate the purpose and intent of the original provisions of this Agreement as fully as possible without being invalid, unenforceable or otherwise illegal.

19. Miscellaneous. No provision of this Agreement may be waived, modified or discharged unless such waiver, modification or discharge is agreed to in writing signed by Indemnitee and the Company. No waiver by either party hereto at any time of any breach by the other party hereto or compliance with any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, expressed or implied with respect to the subject matter hereof have been made by either party that are not set forth expressly in this Agreement. References to Sections are to references to Sections of this Agreement.

20. Legal Fees and Expenses. It is the intent of the Company that Indemnitee not be required to incur legal fees and or other Expenses associated with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement by litigation or otherwise because the cost and expense thereof would substantially detract from the benefits intended to be extended to Indemnitee hereunder. Accordingly, without limiting the generality or effect of any other provision hereof, if it should appear to Indemnitee that the Company has failed to comply with any of its obligations under this Agreement (including its obligations under Section 3) or in the event that the Company or any other person takes or threatens to take any action to declare this Agreement void or unenforceable, or institutes any litigation or other action or proceeding designed to deny, or to recover from, Indemnitee the benefits provided or intended to be provided to Indemnitee hereunder, the Company irrevocably authorizes the Indemnitee from time to time to retain counsel of Indemnitee's choice, at the expense of the Company as hereafter provided, to advise and represent Indemnitee in connection with any such interpretation, enforcement or defense, including without limitation the initiation or defense of any litigation or other legal action, whether by or against the Company or any director, officer, shareholder or other person affiliated with the Company, in any jurisdiction. Notwithstanding any existing or prior attorney-client relationship between the Company and such counsel, the Company irrevocably consents to Indemnitee's entering into an attorney-client relationship with such counsel, and in that connection the Company and Indemnitee agree that a confidential relationship shall exist between Indemnitee and such counsel. Without respect to whether Indemnitee prevails, in whole or in part, in connection with any of the foregoing, the Company will pay and be solely financially responsible for any and all attorneys' and related fees and expenses incurred by Indemnitee in connection with any of the foregoing.

21. Certain Interpretive Matters. Unless the context of this Agreement otherwise requires, (a) "it" or "its" or words of any gender include each other gender, (b) words using the singular or plural number also include the plural or singular number, respectively, (c) the terms "hereof," "herein," "hereby" and derivative or similar words refer to this entire Agreement, (d) the terms "Article," "Section," "Annex" or "Exhibit" refer to the specified Article, Section, Annex or Exhibit of or to this Agreement, (e) the terms "include," "includes" and "including" will be deemed to be followed by the words "without limitation" (whether or not so expressed), and (f) the word "or" is disjunctive but not exclusive. Whenever this Agreement refers to a number of days, such number will refer to calendar days unless business days are specified and

whenever action must be taken (including the giving of notice or the delivery of documents) under this Agreement during a certain period of time or by a particular date that ends or occurs on a non-business day, then such period or date will be extended until the immediately following business day. As used herein, “business day” means any day other than Saturday, Sunday or a United States federal holiday.

22. Counterparts. This Agreement may be executed in one or more counterparts, each of which will be deemed to be an original but all of which together shall constitute one and the same agreement.

[Signatures Appear On Following Page]

IN WITNESS WHEREOF, Indemnatee has executed and the Company has caused its duly authorized representative to execute this Agreement as of the date first above written.

BRUSH ENGINEERED MATERIALS INC.
6070 Parkland Blvd.
Mayfield Hts., OH 44124

By: _____
Name:
Title:

[INDEMNITEE]
[Address]

[Indemnatee]

EXHIBIT A
UNDERTAKING
UNDERTAKING

STATE OF)
) SS
COUNTY OF)

I, _____, being first duly sworn, do depose and say as follows:

1. This Undertaking is submitted pursuant to the Officer Indemnification Agreement, dated _____, 2 ____, between Brush Engineered Materials Inc., an Ohio corporation (the “ ***Company*** ”) and the undersigned.

2. I am requesting payment of Expenses that I have reasonably incurred or will reasonably incur in defending an Indemnifiable Claim referred to in the aforesaid Officer Indemnification Agreement.

3. The Expenses for which payment is requested are, in general, all expenses related to

_____.

4. I hereby undertake to repay all amounts paid pursuant hereto if it ultimately is determined that I am not entitled to be indemnified by the Company under the aforesaid Officer Indemnification Agreement or otherwise.

[Signature of Indemnitee]

Subscribed and sworn to before me, a Notary Public in and for said County and State, this ____ day of _____, 2 ____.

[Seal]

My commission expires the ____ day of _____, 2 ____.

DIRECTOR INDEMNIFICATION AGREEMENT

This Director Indemnification Agreement, dated as of _____, 200__ (this “**Agreement**”), is made by and between Brush Engineered Materials Inc., an Ohio corporation (the “**Company**”), and _____ (“**Indemnitee**”), who is a director of the Company.

RECITALS :

- A. Section 1701.59 of the Ohio Revised Code (the “**ORC**”) provides that the business and affairs of a corporation shall be managed by or under the direction of its directors.
- B. By virtue of the managerial prerogatives vested in the directors of an Ohio corporation, directors act as fiduciaries of the corporation and its shareholders.
- C. Thus, it is critically important to the Company and its shareholders that the Company be able to attract and retain the most capable persons reasonably available to serve as directors of the Company.
- D. In recognition of the need for corporations to be able to induce capable and responsible persons to accept positions in corporate management, ORC §1701.13(E) authorizes (and in some instances requires) corporations to indemnify their directors, authorizes (and sometimes requires) corporations to advance funds to pay for expenses of its directors prior to the final disposition of an action, suit or proceeding, and further authorizes corporations to purchase and maintain insurance for the benefit of their directors.
- E. Indemnification by a corporation serves the policies of (1) allowing directors to resist unjustified lawsuits, secure in the knowledge that, if vindicated, the corporation will bear the expense of litigation; (2) encouraging capable women and men to serve as corporate directors, secure in the knowledge that the corporation will absorb the costs of defending their honesty and integrity; and (3) allowing directors and corporations to dispose of vexacious and distracting litigation through negotiation of settlements.
- F. The number of lawsuits challenging the judgment and actions of corporate directors, the costs of defending those lawsuits, and the threat to directors’ personal assets have all materially increased over the past several years, chilling the willingness of capable women and men to undertake the responsibilities imposed on corporate directors.
- G. Federal legislation and rules adopted by the Securities and Exchange Commission and the national securities exchanges have imposed additional disclosure and corporate governance obligations on directors of public companies and have exposed such directors to additional and substantially broadened civil liabilities.
- H. These legislative and regulatory initiatives have also exposed directors of public companies to a significantly greater risk of criminal proceedings, with attendant defense costs and potential criminal fines and penalties.
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I. Under Ohio law, a director's right to be reimbursed for the costs of defense of criminal actions, whether such claims are asserted under state or federal law, does not depend upon the merits of the claims asserted against the director, which are separate and distinct from any right to indemnification the director may be able to establish, and indemnification of the director against criminal fines and penalties is permitted if the director satisfies the applicable standard of conduct as a director.

J. Indemnitee is a director of the Company and Indemnitee's willingness to continue to serve in such capacity is predicated, in substantial part, upon the Company's willingness to indemnify Indemnitee in accordance with the principles reflected above, to the fullest extent permitted by the laws of the state of Ohio, and upon the other undertakings set forth in this Agreement.

K. Section 34 of the Company's Amended and Restated Code of Regulations (the "Regulations") require the Company to indemnify each director and former director of the Company to the full extent then permitted by law. However, recent court decisions in Delaware, while not binding on the courts of Ohio interpreting Ohio law, have raised questions as to the ability of directors generally to rely on such provisions following their retirement or other departure from the board in the event that there is a subsequent amendment to the [Regulations][Articles] that alters or eliminates the indemnification provisions of those documents.

L. Section 36 of the Company's Regulations provides that the Company, with the approval of the Board of Directors may enter into agreements with any persons that the Company may indemnify under the Regulations, and undertake thereby to indemnify such persons and to pay the expenses incurred by them in defending any action, suit or proceeding against them, whether or not the Company would have power under the law or the Articles to indemnify such person.

M. Therefore, in recognition of the need to provide Indemnitee with contractual protection against personal liability, in order to procure Indemnitee's continued service as a director of the Company and to enhance Indemnitee's ability to serve the Company in an effective manner, and in order to provide such protection pursuant to express contract rights (intended to be enforceable irrespective of, among other things, any amendment to the Company's Amended and Restated Articles of Incorporation or the Regulations (collectively, the "**Constituent Documents**"), any change in the composition of the Company's Board of Directors (the "**Board**") or any change-in-control or business combination transaction relating to the Company), or any change in the director's status through retirement or resignation, the Company wishes to provide in this Agreement for the indemnification of and the advancement of Expenses (as defined in Section 1(e)) to Indemnitee as set forth in this Agreement and for the continued coverage of Indemnitee under the Company's directors' and officers' liability insurance policies.

N. In light of the considerations referred to in the preceding recitals, it is the Company's intention and desire that the provisions of this Agreement be construed liberally, subject to their express terms, to maximize the protections to be provided to Indemnitee hereunder.

AGREEMENT :

NOW, THEREFORE, the parties hereby agree as follows:

1. Certain Definitions. In addition to terms defined elsewhere herein, the following terms have the following meanings when used in this Agreement with initial capital letters:

(a) ***“Change in Control”*** means the occurrence after the date of this Agreement of any of the following events:

(i) the acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act) (a ***“Person”***) of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 20% or more of the combined voting power of the then-outstanding Voting Stock of the Company; *provided , however , that:*

(A) for purposes of this Section 1(a)(i), the following acquisitions will not constitute a Change in Control: (1) any acquisition of Voting Stock of the Company directly from the Company that is approved by a majority of the Incumbent Directors, (2) any acquisition of Voting Stock of the Company by the Company or any Subsidiary, (3) any acquisition of Voting Stock of the Company by any employee benefit plan (or related trust) sponsored or maintained by the Company or any Subsidiary, and (4) any acquisition of Voting Stock of the Company by any Person pursuant to a Business Combination that complies with clauses (A), (B) and (C) of Section 1(a)(iii) below;

(B) if any Person acquires beneficial ownership of 20% or more of combined voting power of the then-outstanding Voting Stock of the Company as a result of a transaction described in clause (A)(1) of Section 1(a)(i) and such Person thereafter becomes the beneficial owner of any additional shares of Voting Stock of the Company representing 1% or more of the then-outstanding Voting Stock of the Company, other than in an acquisition directly from the Company that is approved by a majority of the Incumbent Directors or other than as a result of a stock dividend, stock split or similar transaction effected by the Company in which all holders of Voting Stock are treated equally, such subsequent acquisition will be deemed to constitute a Change in Control;

(C) a Change in Control will not be deemed to have occurred if a Person acquires beneficial ownership of 20% or more of the Voting Stock of the Company as a result of a reduction in the number of shares of Voting Stock of the Company outstanding unless and until such Person thereafter becomes the beneficial owner of any additional shares of Voting Stock of the Company representing 1% or more of the then-outstanding Voting Stock of the Company, other than in an acquisition directly from the Company that is approved by a majority of the Incumbent Directors or other than as a result of a stock dividend, stock split or similar transaction effected by the Company in which all holders of Voting Stock are treated equally; and

(D) if at least a majority of the Incumbent Directors determine in good faith that a Person has acquired beneficial ownership of 20% or more of the Voting Stock of the Company inadvertently, and such Person divests as promptly as practicable a sufficient number of shares so that such Person beneficially owns less than 20% of the Voting

Stock of the Company, then no Change in Control will have occurred as a result of such Person's acquisition; or

(ii) a majority of the Directors are not Incumbent Directors; 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 Company or the acquisition of assets of another corporation, or other transaction (each, a **"Business Combination"**), unless, in each case, immediately following such Business Combination (A) all or substantially all of the individuals and entities who were the beneficial owners of Voting Stock of the Company immediately prior to such Business Combination beneficially own, directly or indirectly, more than 60% of the combined voting power of the then outstanding shares of Voting Stock of the entity resulting from such Business Combination (including, without limitation, an entity which as a result of such transaction owns the Company or all or substantially all of the Company's assets either directly or through one or more subsidiaries), (B) no Person (other than the Company, such entity resulting from such Business Combination, or any employee benefit plan (or related trust) sponsored or maintained by the Company, any Subsidiary or such entity resulting from such Business Combination or a holding company as described in ORC §1701.802(A)) beneficially owns, directly or indirectly, 20% or more of the combined voting power of the then outstanding shares of Voting Stock of the entity resulting from such Business Combination, and (C) at least a majority of the members of the Board of Directors of the entity resulting from such Business Combination were Incumbent Directors 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 Company of a complete liquidation or dissolution of the Company, except pursuant to a Business Combination that complies with clauses (A), (B) and (C) of Section 1(a)(iii).

For purposes of this Section 1(a) and as used elsewhere in this Agreement, the following terms have the following meanings:

(A) **"Exchange Act"** means the Securities Exchange Act of 1934, as amended.

(B) **"Incumbent Directors"** means the individuals who, as of the date hereof, are Directors of the Company and any individual becoming a Director subsequent to the date hereof whose election, nomination for election by the Company's shareholders, or appointment, was approved by a vote of at least two-thirds of the then Incumbent Directors (either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for director, without objection to such nomination); *provided, however*, that an individual will not be an Incumbent Director if such individual's election or appointment to the Board occurs as a result of an actual or threatened election contest (as described in Rule 14a-12(c) of the Exchange Act) 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.

(C) “**Subsidiary**” means an entity in which the Company or any holding company as described in ORC §1701.802(A) directly or indirectly beneficially owns 50% or more of the outstanding Voting Stock.

(D) “**Voting Stock**” means securities entitled to vote generally in the election of directors (or similar governing bodies).

(b) “**Claim**” means (i) any threatened, asserted, pending or completed claim, demand, action, suit or proceeding, whether civil, criminal, administrative, arbitrative, investigative or other, and whether made pursuant to federal, state or other law; and (ii) any threatened, pending or completed inquiry or investigation, whether made, instituted or conducted by the Company or any other person, including without limitation any federal, state or other governmental entity, that Indemnitee determines might lead to the institution of any such claim, demand, action, suit or proceeding.

(c) “**Controlled Affiliate**” means any corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, whether or not for profit, that is directly or indirectly controlled by the Company. For purposes of this definition, “control” means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of an entity or enterprise, whether through the ownership of voting securities, through other voting rights, by contract or otherwise; *provided* that direct or indirect beneficial ownership of capital stock or other interests in an entity or enterprise entitling the holder to cast 20% or more of the total number of votes generally entitled to be cast in the election of directors (or persons performing comparable functions) of such entity or enterprise will be deemed to constitute control for purposes of this definition.

(d) “**Disinterested Director**” means a director of the Company who is not and was not a party to the Claim in respect of which indemnification is sought by Indemnitee.

(e) “**Expenses**” means attorneys’ and experts’ fees and expenses and all other costs and expenses paid or payable in connection with investigating, defending, being a witness in or otherwise participating in (including on appeal), or preparing to investigate, defend, be a witness in or otherwise participate in (including on appeal), any Claim, and any amounts paid in settlement prior to a final, nonappealable judgment or conviction.

(f) “**Indemnifiable Claim**” means any Claim based upon, arising out of or resulting from (i) any actual, alleged or suspected act or failure to act by Indemnitee in his or her capacity as a director, officer, employee or agent of the Company or as a director, officer, employee, member, manager, trustee or agent of any other corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, whether or not for profit, as to which Indemnitee is or was serving at the request of the Company as a director, officer, employee, member, manager, trustee or agent, (ii) any actual, alleged or suspected act or failure to act by Indemnitee in respect of any business, transaction, communication, filing, disclosure or other activity of the Company or any other entity or enterprise referred to in clause (i) of this sentence, or (iii) Indemnitee’s status as a current or former director, officer, employee or agent of the Company or as a current or former director, officer, employee, member, manager, trustee or agent of the Company or any other entity or enterprise referred to in clause (i) of this sentence or any actual, alleged or suspected act or failure to act by Indemnitee in connection with any obligation or restriction imposed upon Indemnitee by reason of such status. In addition to any

service at the actual request of the Company, for purposes of this Agreement, Indemnatee will be deemed to be serving or to have served at the request of the Company as a director, officer, employee, member, manager, trustee or agent of another entity or enterprise if Indemnatee is or was serving as a director, officer, employee, member, manager, trustee or agent of such entity or enterprise and (i) such entity or enterprise is or at the time of such service was a Controlled Affiliate, (ii) such entity or enterprise is or at the time of such service was an employee benefit plan (or related trust) sponsored or maintained by the Company or a Controlled Affiliate, or (iii) the Company or a Controlled Affiliate directly or indirectly caused or authorized Indemnatee to be nominated, elected, appointed, designated, employed, engaged or selected to serve in such capacity.

(g) “**Indemnifiable Losses**” means any and all Losses relating to, arising out of or resulting from any Indemnifiable Claim.

(h) “**Independent Counsel**” means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five years has been, retained to represent: (i) the Company (or any Subsidiary) or Indemnatee in any matter material to either such party (other than with respect to matters concerning the Indemnatee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other named (or, as to a threatened matter, reasonably likely to be named) party to the Indemnifiable Claim giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term “Independent Counsel” will not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnatee in an action to determine Indemnatee’s rights under this Agreement.

(i) “**Losses**” means any and all Expenses, damages, losses, liabilities, judgments, fines, penalties (whether civil, criminal or other) and amounts paid in settlement following a final, nonappealable judgment or conviction, including without limitation all interest, assessments and other charges paid or payable in connection with or in respect of any of the foregoing.

2. Indemnification Obligation. Subject to Section 7, the Company shall indemnify, defend and hold harmless Indemnatee, to the fullest extent permitted or required by the laws of the State of Ohio in effect on the date hereof or as such laws may from time to time hereafter be amended to increase the scope of such permitted indemnification, against any and all Indemnifiable Claims and Indemnifiable Losses; *provided, however*, that, except as provided in Sections 4 and 20, Indemnatee will not be entitled to indemnification pursuant to this Agreement in connection with any Claim initiated by Indemnatee against the Company or any director or officer of the Company unless the Company has joined in or consented to the initiation of such Claim.

3. Advancement of Expenses. Indemnatee will have the right to advancement by the Company prior to the final disposition of any Indemnifiable Claim of any and all Expenses relating to, arising out of or resulting from any Indemnifiable Claim paid or incurred by Indemnatee or which Indemnatee determines are reasonably likely to be paid or incurred by Indemnatee. Indemnatee’s right to such advancement is not subject to the satisfaction of any standard of conduct. Without limiting the generality or effect of the foregoing, within five

business days after any request by Indemnatee, the Company shall, in accordance with such request (but without duplication), (a) pay such Expenses on behalf of Indemnatee, (b) advance to Indemnatee funds in an amount sufficient to pay such Expenses, or (c) reimburse Indemnatee for such Expenses; *provided* that Indemnatee shall repay, without interest any amounts actually advanced to Indemnatee that, at the final disposition of the Indemnifiable Claim to which the advance related, were in excess of amounts paid or payable by Indemnatee in respect of Expenses relating to, arising out of or resulting from such Indemnifiable Claim. For purposes of obtaining payments of Expenses in advance of final disposition, the Indemnatee shall submit to the Company a sworn request for advancement of Expenses substantially in the form of Exhibit A attached hereto and made a part hereof (subject to Indemnatee filling in the blanks therein and selecting from among the bracketed alternatives therein, the “ **Undertaking** ”), averring that the Indemnatee has reasonably incurred or will reasonably incur actual Expenses in defending an Indemnifiable Claim. The Undertaking need not be secured and the Company must accept the Undertaking without reference to Indemnatee’s ability to repay the Expenses. Unless at the time of the Indemnatee’s act or omission at issue, the Constituent Documents prohibit such advances by specific reference to ORC Section 1701.13(E)(5)(a) or unless the only liability asserted against the Indemnatee in the subject action, suit or proceeding is pursuant to ORC Section 1701.95, the Indemnatee will be eligible to execute Part A of the Undertaking by which the Indemnatee undertakes to: (i) repay such amount if it is proved by clear and convincing evidence in a court of competent jurisdiction that the Indemnatee’s action or failure to act involved an act or omission undertaken with deliberate intent to cause injury to the Company or undertaken with reckless disregard for the best interests of the Company; and (ii) reasonably cooperate with the Company concerning the action, suit, proceeding or claim. In all cases, the Indemnatee will be eligible to execute Part B of the Undertaking by which the Indemnatee undertakes to repay such amount if it ultimately is determined that the Indemnatee is not entitled to be indemnified by the Company under this Agreement or otherwise. In the event that the Indemnatee is eligible to and does execute both Part A and Part B of the Undertaking, the Expenses which are paid by the Company pursuant thereto will be required to be repaid by the Indemnatee only if the Indemnatee is required to do so under the terms of both Part A and Part B of the Undertaking. In no event will Indemnatee’s right to the payment, advancement or reimbursement of Expenses pursuant to this Section 3 be conditioned upon any undertaking that is less favorable to Indemnatee than, or that is in addition to, the undertakings set forth in Exhibit A.

4. Indemnification for Additional Expenses. Without limiting the generality or effect of the foregoing, the Company shall indemnify and hold harmless Indemnatee against and, if requested by Indemnatee, shall reimburse Indemnatee for, or advance to Indemnatee, within five business days of such request, any and all Expenses paid or incurred by Indemnatee or which Indemnatee determines are reasonably likely to be paid or incurred by Indemnatee in connection with any Claim made, instituted or conducted by Indemnatee for (a) indemnification or payment, advancement or reimbursement of Expenses by the Company under any provision of this Agreement, or under any other agreement or provision of the Constituent Documents now or hereafter in effect relating to Indemnifiable Claims, and/or (b) recovery under any directors’ and officers’ liability insurance policies maintained by the Company, regardless in each case of whether Indemnatee ultimately is determined to be entitled to such indemnification, reimbursement, advance or insurance recovery, as the case may be; *provided , however ,* that Indemnatee shall return, without interest, any such advance of Expenses (or portion thereof) which remains unspent at the final disposition of the Claim to which the advance related.

5. Partial Indemnity. If Indemnatee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any Indemnifiable Loss, but not for all of the total amount thereof, the Company shall nevertheless indemnify Indemnatee for the portion thereof to which Indemnatee is entitled.

6. Procedure for Notification . To obtain indemnification under this Agreement in respect of an Indemnifiable Claim or Indemnifiable Loss, Indemnatee shall submit to the Company a written request, including a brief description (based upon information then available to Indemnatee) of such Indemnifiable Claim or Indemnifiable Loss. If, at the time of the receipt of such request, the Company has directors' and officers' liability insurance in effect under which coverage for such Indemnifiable Claim or Indemnifiable Loss is potentially available, the Company shall give prompt written notice of such Indemnifiable Claim or Indemnifiable Loss to the applicable insurers in accordance with the procedures set forth in the applicable policies. The Company shall provide to Indemnatee a copy of such notice delivered to the applicable insurers, and copies of all subsequent correspondence between the Company and such insurers regarding the Indemnifiable Claim or Indemnifiable Loss, in each case substantially concurrently with the delivery or receipt thereof by the Company. The failure by Indemnatee to timely notify the Company of any Indemnifiable Claim or Indemnifiable Loss will not relieve the Company from any liability hereunder unless, and only to the extent that, the Company did not otherwise learn of such Indemnifiable Claim or Indemnifiable Loss and such failure results in forfeiture by the Company of substantial defenses, rights or insurance coverage.

7. Determination of Right to Indemnification .

(a) To the extent that Indemnatee shall have been successful on the merits or otherwise in defense of any Indemnifiable Claim or any portion thereof or in defense of any issue or matter therein, including without limitation through a dismissal without prejudice, Indemnatee shall be indemnified against all Indemnifiable Losses relating to, arising out of or resulting from such Indemnifiable Claim in accordance with Section 2 and no Standard of Conduct Determination (as defined in Section 7(b)) will be required. In the event that a matter as to which there has been a dismissal without prejudice is later revived in the same or similar form, that matter will be treated as a new Claim for all purposes of this Agreement.

(b) To the extent that the provisions of Section 7(a) are inapplicable to an Indemnifiable Claim that will have been finally disposed of, any determination of whether Indemnatee has satisfied any applicable standard of conduct under Ohio law that is a legally required condition precedent to indemnification of Indemnatee hereunder against Indemnifiable Losses relating to, arising out of or resulting from such Indemnifiable Claim (a “ **Standard of Conduct Determination** ”) will be made as follows: (i) if a Change in Control shall not have occurred, or if a Change in Control shall have occurred but Indemnatee shall have requested that the Standard of Conduct Determination be made pursuant to this clause (i), (A) by a majority vote of a quorum consisting of the Disinterested Directors, (B) if such Disinterested Directors so direct, by a majority vote of a committee of Disinterested Directors designated by a majority vote of all Disinterested Directors, or (C) if such quorum of Disinterested Directors is not available or if a majority of such a quorum so direct, by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnatee; and (ii) if a Change in Control shall have occurred and Indemnatee shall not have requested that the Standard of Conduct Determination be made pursuant to clause (i), by Independent Counsel in a written opinion

addressed to the Board, a copy of which shall be delivered to Indemnitee. Indemnitee will cooperate with the person or persons making such Standard of Conduct Determination, including providing to such person or persons, upon reasonable advance request, any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. The Company shall indemnify and hold harmless Indemnitee against and, if requested by Indemnitee, shall reimburse Indemnitee for, or advance to Indemnitee, within five business days of such request, any and all costs and expenses (including attorneys' and experts' fees and expenses) incurred by Indemnitee in so cooperating with the person or persons making such Standard of Conduct Determination.

(c) The Company shall use its reasonable best efforts to cause any Standard of Conduct Determination required under Section 7(b) to be made as promptly as practicable. If (i) the person or persons empowered or selected under Section 7 to make the Standard of Conduct Determination shall not have made a determination within 30 days after the later of (A) receipt by the Company of written notice from Indemnitee advising the Company of the final disposition of the applicable Indemnifiable Claim (the date of such receipt being the “**Notification Date**”) and (B) the selection of an Independent Counsel, if such determination is to be made by Independent Counsel, that is permitted under the provisions of Section 7(e) to make such determination and (ii) Indemnitee shall have fulfilled his/her obligations set forth in the second sentence of Section 7(b), then Indemnitee shall be deemed to have satisfied the applicable standard of conduct; *provided* that such 30-day period may be extended for a reasonable time, not to exceed an additional 30 days, if the person or persons making such determination in good faith requires such additional time for the obtaining or evaluation or documentation and/or information relating thereto.

(d) If (i) Indemnitee shall be entitled to indemnification hereunder against any Indemnifiable Losses pursuant to Section 7(a), (ii) no determination of whether Indemnitee has satisfied any applicable standard of conduct under Ohio law is a legally required condition precedent to indemnification of Indemnitee hereunder against any Indemnifiable Losses, or (iii) Indemnitee has been determined or deemed pursuant to Section 7(b) or (c) to have satisfied any applicable standard of conduct under Ohio law which is a legally required condition precedent to indemnification of Indemnitee hereunder against any Indemnifiable Losses, then the Company shall pay to Indemnitee, within five business days after the later of (x) the Notification Date in respect of the Indemnifiable Claim or portion thereof to which such Indemnifiable Losses are related, out of which such Indemnifiable Losses arose or from which such Indemnifiable Losses resulted and (y) the earliest date on which the applicable criterion specified in clause (i), (ii) or (iii) above shall have been satisfied, an amount equal to the amount of such Indemnifiable Losses.

(e) If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 7(b)(i), the Independent Counsel shall be selected by the Board of Directors, and the Company shall give written notice to Indemnitee advising him or her of the identity of the Independent Counsel so selected. If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 7(b)(ii), the Independent Counsel shall be selected by Indemnitee, and Indemnitee shall give written notice to the Company advising it of the identity of the Independent Counsel so selected. In either case, Indemnitee or the Company, as applicable, may, within five business days after receiving written notice of selection from the

other, deliver to the other a written objection to such selection; *provided, however*, that such objection may be asserted only on the ground that the Independent Counsel so selected does not satisfy the criteria set forth in the definition of “Independent Counsel” in Section 1(h), and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person or firm so selected will act as Independent Counsel. If such written objection is properly and timely made and substantiated, (i) the Independent Counsel so selected may not serve as Independent Counsel unless and until such objection is withdrawn or a court has determined that such objection is without merit and (ii) the non-objecting party may, at its option, select an alternative Independent Counsel and give written notice to the other party advising such other party of the identity of the alternative Independent Counsel so selected, in which case the provisions of the two immediately preceding sentences and clause (i) of this sentence shall apply to such subsequent selection and notice. If applicable, the provisions of clause (ii) of the immediately preceding sentence shall apply to successive alternative selections. If no Independent Counsel that is permitted under the foregoing provisions of this Section 7(e) to make the Standard of Conduct Determination shall have been selected within 30 days after the Company gives its initial notice pursuant to the first sentence of this Section 7(e) or Indemnitee gives its initial notice pursuant to the second sentence of this Section 7(e), as the case may be, either the Company or Indemnitee may petition the Federal or state courts of Ohio for resolution of any objection which shall have been made by the Company or Indemnitee to the other’s selection of Independent Counsel and/or for the appointment as Independent Counsel of a person or firm selected by the court or by such other person as the court shall designate, and the person or firm with respect to whom all objections are so resolved or the person or firm so appointed will act as Independent Counsel. In all events, the Company shall pay all of the reasonable fees and expenses of the Independent Counsel incurred in connection with the Independent Counsel’s determination pursuant to Section 7(b).

8. Presumption of Entitlement. In making any Standard of Conduct Determination, the person or persons making such determination shall presume that Indemnitee has satisfied the applicable standard of conduct, and the Company may overcome such presumption only by its adducing clear and convincing evidence to the contrary. Any Standard of Conduct Determination that is adverse to Indemnitee may be challenged by the Indemnitee in the state or Federal courts in Ohio. No determination by the Company (including by its directors or any Independent Counsel) that Indemnitee has not satisfied any applicable standard of conduct shall be a defense to any Claim by Indemnitee for indemnification or reimbursement or advance payment of Expenses by the Company hereunder or create a presumption that Indemnitee has not met any applicable standard of conduct.

9. No Other Presumption. For purposes of this Agreement, the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of *nolo contendere* or its equivalent, will not create a presumption that Indemnitee did not meet any applicable standard of conduct or that indemnification hereunder is otherwise not permitted.

10. Non-Exclusivity. The rights of Indemnitee hereunder will be in addition to any other rights Indemnitee may have under the Constituent Documents, or the substantive laws of the Company’s jurisdiction of incorporation, any other contract or otherwise (collectively, “**Other Indemnity Provisions** ”); *provided, however*, that (a) to the extent that Indemnitee otherwise would have any greater right to indemnification under any Other Indemnity Provision,

Indemnitee will be deemed to have such greater right hereunder and (b) to the extent that any change is made to any Other Indemnity Provision which permits any greater right to indemnification than that provided under this Agreement as of the date hereof, Indemnitee will be deemed to have such greater right hereunder. The Company will not adopt any amendment to any of the Constituent Documents the effect of which would be to deny, diminish or encumber Indemnitee's right to indemnification under this Agreement or any Other Indemnity Provision.

11. Liability Insurance and Funding. For the duration of Indemnitee's service as a director of the Company, and thereafter for so long as Indemnitee shall be subject to any pending or possible Indemnifiable Claim, the Company shall use commercially reasonable efforts (taking into account the scope and amount of coverage available relative to the cost thereof) to cause to be maintained in effect policies of directors' and officers' liability insurance providing coverage for directors and/or officers of the Company that is at least substantially comparable in scope and amount to that provided by the Company's current policies of directors' and officers' liability insurance. The Company shall provide Indemnitee with a copy of all directors' and officers' liability insurance applications, binders, policies, declarations, endorsements and other related materials, and shall provide Indemnitee with a reasonable opportunity to review and comment on the same. Without limiting the generality or effect of the two immediately preceding sentences, the Company shall not discontinue or significantly reduce the scope or amount of coverage from one policy period to the next (i) without the prior approval thereof by a majority vote of the Incumbent Directors, even if less than a quorum, or (ii) if at the time that any such discontinuation or significant reduction in the scope or amount of coverage is proposed there are no Incumbent Directors, without the prior written consent of Indemnitee (which consent shall not be unreasonably withheld or delayed). In all policies of directors' and officers' liability insurance obtained by the Company, Indemnitee shall be named as an insured in such a manner as to provide Indemnitee the same rights and benefits, subject to the same limitations, as are accorded to the Company's directors and officers most favorably insured by such policy. The Company may, but shall not be required to, create a trust fund, grant a security interest or use other means, including without limitation a letter of credit, to ensure the payment of such amounts as may be necessary to satisfy its obligations to indemnify and advance expenses pursuant to this Agreement.

12. Subrogation. In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the related rights of recovery of Indemnitee against other persons or entities (other than Indemnitee's successors), including any entity or enterprise referred to in clause (i) of the definition of "Indemnifiable Claim" in Section 1(f). Indemnitee shall execute all papers reasonably required to evidence such rights (all of Indemnitee's reasonable Expenses, including attorneys' fees and charges, related thereto to be reimbursed by or, at the option of Indemnitee, advanced by the Company).

13. No Duplication of Payments. The Company shall not be liable under this Agreement to make any payment to Indemnitee in respect of any Indemnifiable Losses to the extent Indemnitee has otherwise actually received payment (net of Expenses incurred in connection therewith) under any insurance policy, the Constituent Documents and Other Indemnity Provisions or otherwise (including from any entity or enterprise referred to in clause (i) of the definition of "Indemnifiable Claim" in Section 1(f)) in respect of such Indemnifiable Losses otherwise indemnifiable hereunder.

14. Defense of Claims. The Company shall be entitled to participate in the defense of any Indemnifiable Claim or to assume the defense thereof, with counsel reasonably satisfactory to the Indemnatee; *provided* that if Indemnatee believes, after consultation with counsel selected by Indemnatee, that (a) the use of counsel chosen by the Company to represent Indemnatee would present such counsel with an actual or potential conflict, (b) the named parties in any such Indemnifiable Claim (including any impleaded parties) include both the Company and Indemnatee and Indemnatee shall conclude that there may be one or more legal defenses available to Indemnatee that are different from or in addition to those available to the Company, or (c) any such representation by such counsel would be precluded under the applicable standards of professional conduct then prevailing, then Indemnatee shall be entitled to retain separate counsel (but not more than one law firm plus, if applicable, local counsel in respect of any particular Indemnifiable Claim) at the Company's expense. The Company shall not be liable to Indemnatee under this Agreement for any amounts paid in settlement of any threatened or pending Indemnifiable Claim effected without the Company's prior written consent. The Company shall not, without the prior written consent of the Indemnatee, effect any settlement of any threatened or pending Indemnifiable Claim to which the Indemnatee is, or could have been, a party unless such settlement solely involves the payment of money and includes a complete and unconditional release of the Indemnatee from all liability on any claims that are the subject matter of such Indemnifiable Claim. Neither the Company nor Indemnatee shall unreasonably withhold its consent to any proposed settlement; *provided* that Indemnatee may withhold consent to any settlement that does not provide a complete and unconditional release of Indemnatee.

15. Successors and Binding Agreement. (a) The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation, reorganization or otherwise, and including any holding company as described in ORC 1701.802(A)) to all or substantially all of the business or assets of the Company, by agreement in form and substance satisfactory to Indemnatee and his or her counsel, expressly to assume and agree to perform this Agreement in the same manner and to the same extent the Company would be required to perform if no such succession had taken place. This Agreement shall be binding upon and inure to the benefit of the Company and any successor to the Company, including without limitation any person acquiring directly or indirectly all or substantially all of the business or assets of the Company whether by purchase, merger, consolidation, reorganization or otherwise, and including any holding company as described in ORC 1701.802(A) (and such successor will thereafter be deemed the "**Company**" for purposes of this Agreement), but shall not otherwise be assignable or delegatable by the Company.

(b) This Agreement shall inure to the benefit of and be enforceable by the Indemnatee's personal or legal representatives, executors, administrators, heirs, distributees, legatees and other successors.

(c) This Agreement is personal in nature and neither of the parties hereto shall, without the consent of the other, assign or delegate this Agreement or any rights or obligations hereunder except as expressly provided in Sections 15(a) and 15(b). Without limiting the generality or effect of the foregoing, Indemnatee's right to receive payments hereunder shall not be assignable, whether by pledge, creation of a security interest or otherwise, other than by a transfer by the Indemnatee's will or by the laws of descent and distribution, and, in the event of any attempted assignment or transfer contrary to this Section 15(c), the Company will have no liability to pay any amount so attempted to be assigned or transferred.

16. Notices. For all purposes of this Agreement, all communications, including without limitation notices, consents, requests or approvals, required or permitted to be given hereunder shall be in writing and shall be deemed to have been duly given when hand delivered or dispatched by electronic facsimile or electronic mail transmission (with receipt thereof confirmed orally or electronically), or five business days after having been mailed by United States registered or certified mail, return receipt requested, postage prepaid or one business day after having been sent for next-day delivery by a nationally recognized overnight courier service, addressed to the Company (to the attention of the Secretary of the Company) and to Indemnitee at the applicable address shown on the signature page hereto, or to such other address as any party may have furnished to the other in writing and in accordance herewith, except that notices of changes of address will be effective only upon receipt.

17. Governing Law. The validity, interpretation, construction and performance of this Agreement shall be governed by and construed in accordance with the substantive laws of the State of Ohio, without giving effect to the principles of conflict of laws of such State. The Company and Indemnitee each hereby irrevocably consent to the jurisdiction of the state and Federal courts in Ohio for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement and agree that any action instituted under this Agreement shall be brought only in the state or Federal courts in Ohio.

18. Validity. If any provision of this Agreement or the application of any provision hereof to any person or circumstance is held invalid, unenforceable or otherwise illegal, the remainder of this Agreement and the application of such provision to any other person or circumstance shall not be affected, and the provision so held to be invalid, unenforceable or otherwise illegal shall be reformed to the extent, and only to the extent, necessary to make it enforceable, valid or legal. In the event that any court or other adjudicative body shall decline to reform any provision of this Agreement held to be invalid, unenforceable or otherwise illegal as contemplated by the immediately preceding sentence, the parties thereto shall take all such action as may be necessary or appropriate to replace the provision so held to be invalid, unenforceable or otherwise illegal with one or more alternative provisions that effectuate the purpose and intent of the original provisions of this Agreement as fully as possible without being invalid, unenforceable or otherwise illegal.

19. Miscellaneous. No provision of this Agreement may be waived, modified or discharged unless such waiver, modification or discharge is agreed to in writing signed by Indemnitee and the Company. No waiver by either party hereto at any time of any breach by the other party hereto or compliance with any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, expressed or implied with respect to the subject matter hereof have been made by either party that are not set forth expressly in this Agreement. References to Sections are to references to Sections of this Agreement.

20. Legal Fees and Expenses. It is the intent of the Company that Indemnitee not be required to incur legal fees and or other Expenses associated with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement by litigation or otherwise because the cost and expense thereof would substantially detract from the benefits intended to be extended to Indemnitee hereunder. Accordingly, without limiting the generality or effect of any other

provision hereof, if it should appear to Indemnitee that the Company has failed to comply with any of its obligations under this Agreement (including its obligations under Section 3) or in the event that the Company or any other person takes or threatens to take any action to declare this Agreement void or unenforceable, or institutes any litigation or other action or proceeding designed to deny, or to recover from, Indemnitee the benefits provided or intended to be provided to Indemnitee hereunder, the Company irrevocably authorizes the Indemnitee from time to time to retain counsel of Indemnitee's choice, at the expense of the Company as hereafter provided, to advise and represent Indemnitee in connection with any such interpretation, enforcement or defense, including without limitation the initiation or defense of any litigation or other legal action, whether by or against the Company or any director, officer, shareholder or other person affiliated with the Company, in any jurisdiction. Notwithstanding any existing or prior attorney-client relationship between the Company and such counsel, the Company irrevocably consents to Indemnitee's entering into an attorney-client relationship with such counsel, and in that connection the Company and Indemnitee agree that a confidential relationship shall exist between Indemnitee and such counsel. Without respect to whether Indemnitee prevails, in whole or in part, in connection with any of the foregoing, the Company will pay and be solely financially responsible for any and all attorneys' and related fees and expenses incurred by Indemnitee in connection with any of the foregoing.

21. Certain Interpretive Matters. Unless the context of this Agreement otherwise requires, (a) "it" or "its" or words of any gender include each other gender, (b) words using the singular or plural number also include the plural or singular number, respectively, (c) the terms "hereof," "herein," "hereby" and derivative or similar words refer to this entire Agreement, (d) the terms "Article," "Section," "Annex" or "Exhibit" refer to the specified Article, Section, Annex or Exhibit of or to this Agreement, (e) the terms "include," "includes" and "including" will be deemed to be followed by the words "without limitation" (whether or not so expressed), and (f) the word "or" is disjunctive but not exclusive. Whenever this Agreement refers to a number of days, such number will refer to calendar days unless business days are specified and whenever action must be taken (including the giving of notice or the delivery of documents) under this Agreement during a certain period of time or by a particular date that ends or occurs on a non-business day, then such period or date will be extended until the immediately following business day. As used herein, "business day" means any day other than Saturday, Sunday or a United States federal holiday.

22. Counterparts. This Agreement may be executed in one or more counterparts, each of which will be deemed to be an original but all of which together shall constitute one and the same agreement.

[Signatures Appear On Following Page]

IN WITNESS WHEREOF, Indemnatee has executed and the Company has caused its duly authorized representative to execute this Agreement as of the date first above written.

BRUSH ENGINEERED MATERIALS INC.
6070 Parkland Blvd.
Mayfield Hts., OH 44124

By: _____

Name:

Title:

[INDEMNITEE]

[Address]

[Indemnatee]

EXHIBIT A
UNDERTAKING
UNDERTAKING

STATE OF)
) SS
COUNTY OF)

I, _____, being first duly sworn, do depose and say as follows:

1. This Undertaking is submitted pursuant to the Director Indemnification Agreement, dated _____, 2 ____, between Brush Engineered Materials Inc., an Ohio corporation (the “***Company***”) and the undersigned.

2. I am requesting payment of Expenses that I have reasonably incurred or will reasonably incur in defending an Indemnifiable Claim referred to in the aforesaid Director Indemnification Agreement.

3. The Expenses for which payment is requested are, in general, all expenses related to

4. Part Aⁱ

I hereby undertake to (a) repay all amounts paid pursuant hereto if it is proved by clear and convincing evidence in a court of competent jurisdiction that my action or failure to act which is the subject of the matter described herein involved an act or omission undertaken with deliberate intent to cause injury to the Company or undertaken with reckless disregard for the best interests of the Company and (b) reasonably cooperate with the Company concerning the action, suit, proceeding or claim.

[INDEMNITEE NAME]

5. Part B

I hereby undertake to repay all amounts paid pursuant hereto if it ultimately is determined that I am not entitled to be indemnified by the Company under the aforesaid Director Indemnification Agreement or otherwise.

[Signature of Indemnatee]

Subscribed and sworn to before me, a Notary Public in and for said County and State, this ____ day of _____, 2 ____.

[Seal]

My commission expires the ____ day of _____, 2 ____.

-
- ⁱ The Indemnatee shall not be eligible to execute Part A of this Undertaking if, at the time of the Indemnatee's act or omission at issue, the Articles or the Regulations of the Company prohibit such advances by specific reference to the Ohio Revised Code (the "**ORC**") Section 1701.13(E)(5)(a), or if the only liability asserted against the Indemnatee is in an action, suit, or proceeding on the Company's behalf pursuant to ORC Section 1701.95. In the event that the Indemnatee is eligible to and does execute both Part A and Part B hereof, the costs, charges, and expenses which are paid by the Company pursuant hereto shall be required to be repaid by the Indemnatee only if the Indemnatee is required to do so under the terms of both Part A and Part B.

BRUSH ENGINEERED MATERIALS INC. and SUBSIDIARIES
MANAGEMENT PERFORMANCE COMPENSATION PLAN
2009 PLAN YEAR

(as adopted February, 2009)

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, 2009;

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 10, 2009** (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 27th day of February, 2009.

BRUSH ENGINEERED MATERIALS INC.

By _____

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 10, 2009** (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 27th day of February 2009.

BRUSH ENGINEERED MATERIALS INC.

By: _____

**AMENDMENT NO. 4
TO
BRUSH ENGINEERED MATERIALS INC.
DEFERRED COMPENSATION PLAN FOR NONEMPLOYEE DIRECTORS
(AS AMENDED AS OF MAY 16, 2000)**

Recitals

WHEREAS, Brush Engineered Materials Inc. (the "Company") has adopted the Brush Engineered Materials Inc. Deferred Compensation Plan for Nonemployee Directors (As Amended as of May 16, 2000) and as further amended by Amendment No. 1, Amendment No. 2 and Amendment No. 3 (the "Plan").

WHEREAS, the Company now desires to amend the Plan further ("Amendment No. 4"); and

WHEREAS, the Board of Directors of the Company has approved this Amendment No. 4.

Amendment

NOW, THEREFORE, the Plan is hereby amended by this Amendment No. 4, effective as of April 1, 2009, as follows:

1. Section 4.3(b) of the Plan is amended to read as follows:

“(b) A Director who is 55 years of age or older may change his or her election with respect to amounts previously credited to his or her Deferred Compensation Account, except that effective April 1, 2009, a director may no longer elect to change his or her election into or out of Common Shares.”

2. Except as amended by this Amendment No. 4, the Plan shall remain in full force and effect.

**FIRST AMENDMENT
TO
BRUSH ENGINEERED MATERIALS INC.
AMENDED AND RESTATED EXECUTIVE DEFERRED COMPENSATION PLAN II**

The Brush Engineered Materials Inc. Amended and Restated Executive Deferred Compensation Plan II (the "Plan"), adopted on July 29, 2008, is hereby amended in the following respects effective January 1, 2008.

1. Section 2.2 of the Plan is amended and restated as follows:

2.2 Annual Excess Compensation means for a Plan Year a Participant's Base Salary for services performed during the Plan Year, performance compensation payable in the Plan Year under the Brush Engineered Materials Inc. and Subsidiaries Management Performance Compensation Plan, and incentive compensation payable in cash, cash equivalents, equity and equity-based amounts in the Plan Year under the Brush Engineered Materials Inc. and Subsidiaries Long-Term Incentive Plan, whether or not such compensation is reportable on Form W-2 for the Plan Year, but only to the extent that such compensation exceeds the limit imposed on compensation taken into account under the Brush Engineered Materials Inc. Savings and Investment Plan by reason of Code Section 401(a)(17) as determined by the Plan Administrator.

WITNESS WHEREOF, Brush Engineered Materials Inc. has caused this Amendment to be executed by its duly authorized officer this 2nd day of February, 2009.

BRUSH ENGINEERED MATERIALS INC.

By: /s/ Michael C. Hasychak
Name: Michael C. Hasychak
Title: Vice President, Treasurer and Secretary

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
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 Holdings Limited	Ireland
OMC Scientific Czech s.r.o.	Czech Republic
Technical Materials, Inc.	Ohio
Techni-Met, Inc.	Connecticut
Thin Film Technology, Inc.	California
Williams Acquisition, LLC	New York
Williams Advanced Materials Inc.	New York
Williams Advanced Materials Far East Pte Ltd.	Singapore
Williams Advanced Materials (Netherlands) B.V.	Netherlands
Williams Advanced Materials Japan Inc.	Japan
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 February 25, 2009, with respect to the consolidated financial statements of Brush Engineered Materials Inc. and subsidiaries and our report dated February 25, 2009, 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, 2008.

/s/ ERNST & YOUNG LLP

Cleveland, Ohio
February 25, 2009

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, 2008, 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 27rd day of February, 2009.

/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.

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

Dated: February 27, 2009

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.

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

Dated: February 27, 2009

**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, 2008, 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.

/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

Dated: February 27, 2009