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 000-30789

ENTEGRIS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**41-1941551**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

3500 Lyman Boulevard, Chaska, MN 55318
(Address of principal executive offices and zip code)

(952) 556-3131
(Registrant's telephone number, including area code)

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

Title of Class
Common Stock, $0.01 Par Value
Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well known seasoned issuer, as defined in Rule 405 of the Securities Act. ☒ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. ☐ Yes ☒ No

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

Indicate by check mark 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 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, or a non-accelerated filer (Check one):

Large Accelerated Filer ☒ Accelerated Filer ☐ Non-Accelerated Filer ☐

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 voting stock held by non-affiliates of the registrant, based on the last sale price of the Common Stock on June 30, 2008, the last business day of registrant's most recently completed second fiscal quarter, was $712,989,102. Shares held by each officer and director of the registrant and by each person who owned 10 percent or more of the outstanding Common Shares have been excluded from this computation in that such persons may be deemed to be affiliates of the registrant. This determination of affiliate status for this purpose is not necessarily a conclusive determination for other purposes.

As of January 31, 2009, 113,408,201 shares of the registrant's Common Stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Document	Incorporated into Form 10-K
Portions of the Definitive Proxy Statement, to be filed subsequently	Part III

PART I

Item 1. Business.

THE COMPANY

Entegris is a leading provider of a wide range of products and materials used in processing and manufacturing in the semiconductor and other high-technology industries. For the semiconductor industry, our products assure the integrity of critical materials and components throughout the semiconductor manufacturing process, from raw silicon wafer manufacturing to packaging of completed integrated circuits. For other high-technology applications, our products and materials are used to manufacture flat panel displays, high-purity chemicals, photoresists, solar cells, gas lasers, optical and magnetic storage devices, fiber optic cables, fuel cells and critical components for aerospace, glass manufacturing and biomedical applications. We sell our products worldwide through a direct sales force and through distributors in selected regions.

The Company was incorporated in Delaware in March 2005 in connection with a strategic merger of equals transaction between Entegris, Inc., a Minnesota corporation (Entegris Minnesota), and Mykrolis Corporation, a Delaware corporation (Mykrolis). Effective August 6, 2005, Entegris Minnesota and Mykrolis were each merged into the Company with the Company as the surviving corporation to carry on the combined businesses. Unless the context otherwise requires, the terms “Entegris”, “we”, “our”, or the “Company” mean Entegris, Inc., a Delaware corporation, and its subsidiaries; the term “Mykrolis” means Mykrolis Corporation and its subsidiaries when referring to periods prior to August 6, 2005; “Entegris Minnesota” means Entegris, Inc., a Minnesota corporation and its subsidiaries other than Entegris when referring to periods prior to August 6, 2005; and the term “Merger” refers to the transactions effected on August 6, 2005 described above. On August 11, 2008 we acquired Poco Graphite (POCO), a privately held company based in Decatur, Texas. The addition of POCO both augmented our base of business in the semiconductor industry and provided growth opportunities in an array of other high-performance markets. The acquisition of POCO also expanded our materials science capabilities to include graphite and silicon carbide and added a consumable product line made from those materials to our portfolio of products.

We offer a diverse product portfolio that includes more than 16,000 standard and customized products that we believe provide the most comprehensive offering of products and services to maintain the purity and integrity of critical materials used by the semiconductor and other high-technology industries. Our products include both unit driven and capital expense driven products. Unit-driven and consumable products are consumed or exhausted during the manufacturing process and rely on the level of semiconductor and other manufacturing activity to drive growth. Capital expense driven products rely on the expansion of manufacturing capacity to drive growth. Our unit-driven and consumable product class includes membrane-based liquid filters and housings, metal-based gas filters, resin-based gas purifiers, wafer shippers, disk-shipping containers and test assembly and packaging products and consumable graphite and silicon carbide components used in plasma etch, ion implant and chemical vapor deposition processes in semiconductor manufacturing. Our capital expense-driven products include our components, systems and subsystems that use electro-mechanical, pressure differential and related technologies, to permit semiconductor and other electronics manufacturers to monitor and control the flow and condition of process liquids used in these manufacturing processes, and our process carriers that protect the integrity of in-process wafers. Unit-driven and consumable products, including service revenue, accounted for approximately 65%, 60% and 59% of our net sales for fiscal years 2008, 2007 and 2006, respectively, and capital expense-driven products accounted for approximately 35%, 40% and 41% of our net sales for the fiscal years 2008, 2007 and 2006, respectively.

Our Internet address is *www.entegris.com*. On this web site, under the “Investor Relations—SEC Filings” section, we post the following filings as soon as reasonably practicable after they are electronically filed with, or furnished to, the U.S. Securities and Exchange Commission (SEC): our annual, quarterly, and current reports on Forms 10-K, 10-Q, and 8-K; our proxy statements; and any amendments to those reports or statements. All such filings are available on our web site free of charge. The SEC also maintains a web site (*www.sec.gov*) that

contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The content on our web site as referred to in this Form 10-K is not incorporated by reference into this Form 10-K unless expressly noted.

Semiconductor Industry Background

Semiconductors, or integrated circuits, are the building blocks of today's electronics and the backbone of the information age. The market for semiconductors has grown significantly over the past decade. This trend is expected to continue due to increased Internet usage and the continuing demand for applications in data processing, wireless communications, broadband infrastructure, personal computers, handheld electronic devices and other consumer electronics.

The semiconductor materials industry is comprised of a wide variety of materials and consumables that are used throughout the semiconductor production process. The extensive and complex process of turning bare silicon wafers into finished integrated circuits is dependent upon a variety of materials used repeatedly throughout the manufacturing process, such as silicon, chemicals, gases and metals. The handling and purification of these materials during the integrated circuit manufacturing process requires the use of a variety of products, such as liquid and gas filters and purifiers, fluid and gas handling components and wafer shippers and process carriers.

The manufacture of semiconductors is a highly complex process that consists of two principal segments: front-end processes and back-end processes. The front-end process begins with the delivery of raw silicon wafers from wafer manufacturers to semiconductor manufacturers and requires hundreds of highly complex and sensitive manufacturing steps, during which a variety of materials, including chemicals and gases, are applied to the silicon wafer to build the integrated circuits on the wafer surface. We offer products for each of the primary front-end process steps, which are listed below, as well as products to transport in-process wafers between each of these steps.

Deposition. Deposition refers to placing layers of insulating or conductive materials on a wafer surface in thin films that make up the circuit elements of semiconductor devices. The two main deposition processes are physical vapor deposition, where a thin film is deposited on a wafer surface in a low-pressure gas environment, and chemical vapor deposition (CVD), where a thin film is deposited on a wafer surface using a gas medium and a chemical bonding process. In addition, electro-plating technology is utilized for the deposition of low resistance conductive materials such as copper. The control of uniformity and thickness of these films through filtration and purification of the fluids and materials used during the process is critical to the performance of the semiconductor circuit and, consequently, the manufacturing yield. In addition, our graphite chamber liners and shower heads are critical expendable components used in the CVD chamber.

Chemical Mechanical Planarization (CMP). CMP flattens, or planarizes, the topography of the surface of the wafer after deposition to permit the patterning of small features on the resulting smooth surface by the photolithography process. Semiconductor manufacturers need our filtration and purification systems to maintain acceptable manufacturing yields through the chemical mechanical planarization process by filtering the liquid slurries, which are solutions containing abrasive particles in a chemical mixture, to remove oversized particles and contaminants that can cause defects on a wafer's surface, while not affecting the functioning of the abrasive particles in the liquid slurries. In addition, manufacturers use our consumable polyvinyl alcohol (PVA) roller brushes to clean the wafer after completion of the CMP process to prepare the wafer for subsequent operations.

Photolithography. Photolithography is the process step that defines the patterns of the circuits to be built on the chip. Before photolithography, a wafer is pre-coated with photoresist, a light-sensitive film composed of ultra-high purity chemicals in liquid form. The photoresist is exposed to specific forms of radiation, such as ultraviolet light, electrons or x-rays, to form patterns that eventually become the circuitry on the chip. This process is repeated many times, using different patterns and interconnects between layers to form the complex, multi-layer circuitry on a semiconductor chip. As device geometries decrease and wafer sizes increase, it is even more

critical that these photoresists are dispensed on to the chip with accurate thickness and uniformity, as well as with low levels of contamination, and that the process gases are free of micro-contamination so that manufacturers can achieve acceptable yields in the manufacturing process. Our liquid filtration and liquid dispense systems play a critical role in assuring the pure, accurate and uniform dispense of photoresists on to the wafer. In addition, our gas micro-contamination systems eliminate airborne amine contaminants that can disrupt effective photolithography processes.

Etch and Resist Strip. Etch is the process of selectively removing precise areas of thin films that have been deposited on the surface of a wafer. The hardened photoresist protects the remaining material that makes up the circuits. During etch, specific areas of the film not covered by photoresist are removed to leave a desired circuit pattern. Similarly, resist strip is a process of removing the photoresist material from the wafer after the desired pattern has been placed on the wafer. Emerging advanced etch and resist strip applications require precisely controlled gas chemistries and flow rates in order to achieve precise etch and resist strip characteristics. Our gas filters and purifiers help assure the purity of these process gas streams, and our consumable graphite components deliver, baffle and confine these process gases during the etch process.

Ion Implant. Ion implantation provides a means for introducing impurities into the silicon crystal, typically into selected areas defined by the photolithographic process. This selective implanting of ions into defined areas creates electrically conductive areas that form the transistors of the integrated circuits. Ion implanters have the ability to implant selected elements into the silicon wafers at precise locations and depths by bombarding the silicon surface with a precisely controlled beam of electrically charged ions of specific atomic mass and energy. These ions are embedded into the silicon crystal structure, changing the electrical properties of the silicon. The precision of ion implantation techniques permits customers to achieve the necessary control of this doping process to construct up to 500 billion transistors of uniform characteristics on a 300mm wafer. Since these transistors are the starting point of all subsequent process steps, repeatability, uniformity and yield are extremely important. Our consumable graphite components as well as our proprietary low temperature plasma coating process for core components are critical elements of ion implantation equipment.

Wet Cleaning. Ultra-high purity chemicals and photoresists of precise composition are used to clean the wafers, to pattern circuit images and to remove photoresists after etch. Before processes such as photoresist coating, thin film deposition, ion implantation, diffusion and oxidation, and after processes such as ion implantation and etch, the photoresists must be stripped off, and the wafer cleaned in multiple steps of chemical processes. To maintain manufacturing yields and avoid defective products, these chemicals must be maintained at very high purity levels without the presence of foreign material such as particles, ions or organic contaminants. Our liquid filters and purifiers are used to assure the purity of these chemicals.

Our wafer and reticle carriers are high-purity "mini-environments" which carry wafers between each of the above process steps, protecting them from damage and contamination during these transport operations. Our fluid handling components assure the delivery of pure liquid chemicals to each of these process steps. Front-end wafer processing can involve hundreds of steps and take several weeks. As a result, a batch of 25 fully processed wafers, the maximum number of wafers that can be transported in one of our products, can be worth several million dollars. Since significant value is added to the wafer during each successive manufacturing step, it is essential that the wafer be handled carefully and precisely to minimize damage. Thus, in the case of wafer carriers, precise wafer positioning, highly reliable and predictable cassette interface dimensions and advanced materials are crucial. The failure to prevent damage to wafers can severely impact integrated circuit performance, render an integrated circuit inoperable or disrupt manufacturing operations. Our products enable semiconductor manufacturers to: minimize contamination (semiconductor processing is now so sensitive that ionic contamination in certain processing chemicals is measured in parts per trillion); protect semiconductor devices from electrostatic discharge and shock; avoid process interruptions; prevent damage or abrasion to wafers and materials during automated processing caused by contact with other materials or equipment; prevent damage due to abrasion or vibration of work-in-process and finished goods during transportation to and from customer and supplier facilities; and eliminate the dangers associated with handling toxic chemicals.

Once the front-end manufacturing process is completed, finished wafers are transferred to back-end manufacturers or assemblers. The back-end semiconductor manufacturing process consists of test, assembly and packaging of finished wafers into integrated circuits. Our wafer shippers, wafer and reticle carriers and integrated circuit trays facilitate the storage, transport, processing and protection of wafers through these front-end and back-end manufacturing steps.

Semiconductor manufacturing has become increasingly complex in recent years as new technologies have been introduced to enhance device performance and as larger wafer sizes have been introduced to increase production efficiencies. This increasing complexity of semiconductor devices has resulted in a number of challenges including the need for more complex, higher-precision liquid and gas delivery, measurement, control and purification systems and subsystems in the front-end manufacturing processes and to improve time-to-market, reduce manufacturing costs, improve production quality and enhance product reliability and long-term service and support. To address these challenges, semiconductor equipment companies and device manufacturers are outsourcing the design and manufacture of liquid delivery, measurement, control and purification systems, subsystems, components, and consumables to us and to other well-established subsystem and component companies that have worldwide presence and leading technologies. The design and performance of those liquid delivery systems, subsystems, components and consumables are critical to the front-end semiconductor manufacturing process because they directly affect cost of ownership and manufacturing yields. We continually seek opportunities to work with our customers to address these challenges.

Also in response to these challenges and to achieve continued productivity gains, semiconductor manufacturers have become increasingly focused on materials management solutions that enable them to safely store, handle, process and transport critical materials throughout the manufacturing process to minimize the potential for damage or degradation to their materials and to protect their investment in processed wafers. The need for efficient and reliable materials management is particularly important as new materials are introduced and as 300 mm semiconductor wafer manufacturing becomes the more prevalent manufacturing technology. Processing 300 mm wafers, currently the largest wafer size in a manufacturing environment, is more costly and more complex because of the larger size of these wafers. In addition, new materials and circuit shrinkage create new contamination and material compatibility risks, rendering 300 mm wafers more vulnerable to damage or contamination. These trends will present new and increasingly difficult purification, dispense, shipping, transport, process and storage challenges. We seek to bring our advanced polymer manufacturing and advanced tool design capabilities to bear on these challenges to provide our customers with innovative materials integrity management solutions.

Many of the processes used to manufacture semiconductors are also used to manufacture flat panel displays, magnetic and optical storage devices and fiberoptic cables for telecommunications, resulting in the need for similar filtration, purification, control and measurement capabilities. We seek to leverage our products and expertise in serving semiconductor applications to address these important market opportunities.

Our Business Strategy

Our objective is to be a global leader providing innovative products and solutions for purifying, protecting and transporting critical materials used in processing and manufacturing in the semiconductor and other high-technology industries. We intend to build upon our position as a worldwide developer, manufacturer and supplier of liquid delivery systems, components and consumables used by semiconductor and other electronic device manufacturers and upon our expertise in advanced specialty materials to grow our business in these and other high value-added manufacturing process markets. Our strategy includes the following key elements:

Comprehensive and Diverse Product Offerings. The semiconductor manufacturing industry is driven by rapid technological changes and intense competition. We believe that semiconductor manufacturers are seeking process control suppliers who can provide a broad range of reliable, flexible and cost-effective products, as well as the technological and application design expertise necessary to deliver effective solutions. Our comprehensive

product offering enables us to meet a broad range of customer needs and provide a single source of flexible product offerings for semiconductor device and capital equipment manufacturers as they seek to consolidate their supplier relationships to a smaller select group. In addition, we believe manufacturers of semiconductor tools are looking to their suppliers for subsystems that provide more integrated functionality and seamlessly communicate with other equipment. We believe our offering of consumables and equipment, as well as our ability to integrate them, allows us to provide advanced subsystems.

Diversified Revenue Stream. We target a diversified revenue stream by balancing our sales of wafer transport and process carriers as well as component and subsystem equipment products with sales of our unit-driven and consumable products. Our unit-driven and consumable products provide a relatively more stable and recurring source of revenue in this cyclical industry. Our capital expense-driven products, which are generally dependent upon such factors as the construction and expansion of semiconductor manufacturing facilities and the retrofitting and renovation of existing semiconductor facilities, position us to benefit from increases in capital spending that are typically more subject to the volatility of industry cycles.

Technology Leadership. With the emergence of smaller and more powerful semiconductor devices, and the deployment of new materials and processes to produce them, we believe there is a need for greater materials management within the semiconductor fabrication process. We seek to extend our technology by developing advanced products that address more stringent requirements for greater purification, protection and transport of high value-added materials and for contamination control, fluid delivery and monitoring, and system integration. We have continuously improved our products as our customers' needs have evolved. For example, we have developed proprietary materials blends for use in our wafer handling product family that address the contamination concerns of advanced semiconductor processing below 100 nanometers; we have also developed a next-generation 300 mm front-opening unified pod utilizing those materials targeting the needs of 65 nm production; and we have expanded upon our proprietary two-stage dispense technology with integrated filtration for photoresist delivery, where the photoresist is filtered through one pump and precisely dispensed through a second pump at a different flow rate to reduce defects on wafers.

Strong Customer Base. We have established ongoing relationships with many leading original equipment manufacturers and materials suppliers in our key markets. These industry relationships have provided us with the opportunity for significant collaboration with our customers at the product design stage, which has facilitated our ability to introduce new products and applications that meet our customers' needs. For example, we work with our key customers at the pre-design and design stages to identify and respond to their requests for current and future generations of products. We target opportunities to offer new technologies in emerging applications, such as copper plating, chemical mechanical planarization, wet-dry cleaning systems and photolithography. We believe that our large customer base will continue to be an important source of new product development ideas.

Global Presence. We have established a global infrastructure of design, manufacturing, distribution, service and support facilities to meet the needs of our customers. In addition, we may expand our global infrastructure, either through acquisition or internal development, to accommodate increased demand, or we may consolidate inefficient operations to optimize our manufacturing and other capabilities. For example, we have established sales and service offices in China in anticipation of a growing semiconductor manufacturing base in that region. As semiconductor and other electronic device manufacturers have become increasingly global, they have required that suppliers offer comprehensive local repair and customer support services. In response to this trend we transferred customer support and logistics activities to local regions in an effort to enhance our global customer contact and awareness. We maintain our customer relationships through a combination of direct sales and support personnel and selected independent sales representatives and distributors in Asia, Europe and the Middle East.

Ancillary Markets. We plan to leverage our accumulated expertise in the semiconductor industry by developing products for applications that employ similar production processes that utilize materials integrity management, high-purity fluids and integrated dispense system technologies. Our products are used in manufacturing processes outside of the semiconductor industry, including the manufacturing of flat panel displays, fuel cell components,

high-purity chemicals, photoresists, solar cells, gas lasers, optical and magnetic storage devices and fiberoptic cables. We plan to continue to identify and develop products that address materials management and advanced materials processing applications where fluid management plays a critical role. We believe that by utilizing our technology to provide manufacturing solutions across multiple industries, we are able to increase the total available market for our products and reduce, to an extent, our exposure to the cyclicality of any particular market.

Strategic Acquisitions, Partnerships and Related Transactions. We plan to pursue strategic acquisitions and business partnerships that enable us to address gaps in our product offerings, secure new customers, diversify into complementary product markets and broaden our technological capabilities and product offerings. Our acquisition of Poco Graphite in August of 2008 is an example of this strategy. Poco Graphite reinforces our presence in that industry by providing a group of new products critical to front-end semiconductor manufacturing based on a materials science that we did not previously have in our technology portfolio. Further, as the dynamics of the markets that we serve shift, we will reevaluate the ability of our existing businesses to provide value-added solutions to those markets in a manner that contributes to achieving our objectives; in the event that we conclude that a business is not able to do this, we expect to restructure or replace that business. Our decision to divest our cleaning equipment business in 2007 was made pursuant to this strategy. Finally, we are continuously evaluating opportunities for strategic alliances and joint development efforts with key customers and other industry leaders.

OUR PRODUCTS

Our product portfolio includes three major categories of products: **(i)** contamination control products, a wide range of products that purify, monitor and deliver critical liquids and gases to the semiconductor manufacturing process, **(ii)** microenvironment products, which preserve the integrity of wafers, reticles and electronic components at various stages of transport, processing and storage and **(iii)** specialty materials products, which include critical graphite components used in semiconductor equipment and low-temperature, plasma-enhanced chemical vapor deposition coating of critical components of semiconductor manufacturing equipment used in various stages of the manufacturing process. There follows a detailed description of each of these three categories of products:

CONTAMINATION CONTROL SOLUTIONS

Liquid Filtration Products: Liquid processing occurs during multiple manufacturing steps including photolithography, deposition, planarization and surface etching and cleaning. The fluids that are used include various mixtures of acids, bases, solvents, slurries and photochemicals, which in turn are used over a broad range of operating conditions, including temperatures from 5 degrees Celsius up to 180 degrees Celsius. The design and performance of our liquid filtration and purification products are critical to the semiconductor manufacturing process because they directly affect the cost of ownership and manufacturing yield. Specially designed proprietary filters remove sub-micron sized particles and bubbles from the different fluid streams that are used in the manufacturing process. Some of our filters are constructed with ultra-high molecular weight polyethylene flat sheet membranes that offer improved bubble clearance and gel removal, either of which can cause defects in the wafers if not removed. Our low hold-up volume disposable filters, with flat sheet membranes, use our Connectology™ technology to allow filter changes in less than a minute, significantly faster than conventional filters, to reduce the amount of expensive chemicals lost each time a filter is changed and to minimize operator exposure to hazardous solvents and vapors during changeout. We also offer a line of consumable PVA roller brush products to clean the wafer following the chemical mechanical planarization process. Our unique Planarcore™ PVA roller brush is molded on the core to allow easy installation that reduces tool downtime and a dimensionally stable product that provides consistent wafer-to-wafer cleaning performance.

Components and Systems. Chemicals spend most of their time in contact with fluid storage and management distribution systems, so it is critical for fluid storage and handling components to resist these chemicals and avoid contributing contaminants to the fluid stream. We offer chemical delivery products that allow the consistent and

safe delivery of sophisticated chemicals from the chemical manufacturer to the point-of-use in the semiconductor fab. Most of these products are made from perfluoroalkoxy or PFA, a fluoropolymer resin widely used in the semiconductor industry because of its high purity and inertness to chemicals. The innovative design and reliable performance of our products and systems under the most stringent of process conditions has made us a recognized leader in high-purity fluid transfer products and systems. Both semiconductor manufacturers and semiconductor OEMs use our chemical delivery products and systems. Our comprehensive product line provides our customers with a single-source provider for their chemical storage and management needs throughout the manufacturing process. Our chemical delivery products include valves, fittings, tubing, pipe, chemical containers and custom fabricated products for high-purity chemical applications.

Our proprietary photochemical filtration and dispense systems integrate our patented two-stage, filter device and valve control technologies. We believe that we offer the microelectronics industry the only dispense systems with integrated filtration capability and that our proprietary patented two-stage technology has a significant advantage over conventional single-stage technology. Our two-stage technology permits the filtering and dispense functions to operate independently so that filtering and dispensing of photochemicals can occur at different rates, reducing the differential pressure across the filter, conserving expensive photochemicals and resulting in reduced defects in wafers. As described above, we offer a line of proprietary filters specifically designed to efficiently connect with these systems. Our patented digital valve control technology improves chemical uniformity on wafers and improves ease of optimized system operation. In addition, our integrated high-precision liquid dispense systems enable uniform application of photoresists for the spin-coating process, where uniformity is measured in units of Angstroms, a tiny fraction of the thickness of a human hair.

We offer a wide variety of measurement and control products for high-purity and corrosive applications. For electronic measurement and control of liquids, we provide a complete line of pressure and flow measurement and control products as well as all-plastic capacitance sensors for leak detection, valve position, chemical level and other measurements. We also offer a complete line of sight tube-style flowmeters and mechanical gauge pressure measurement products.

Gas Filtration Products. Our Wafergard®, ChamberGard™ and Waferpure® particle and molecular filtration products purify the gas entering the process chamber in order to eliminate system and wafer problems due to particulate, atmospheric and chemical contaminants. These filters are able to retain all particles 0.003 microns and larger. Our metal filters, such as stainless steel and nickel filters, reduce outgassing and improve corrosion resistance. Our Waferpure ® and Aeronex Gatekeeper® purifiers chemically react with and absorb volatile contaminants, such as oxygen and water, to prevent contamination, and our ChamberGard ™ vent diffusers reduce particle contamination and processing cycle times. We offer a wide variety of gas purification products to meet the stringent requirements of semiconductor processing. Our Aeronex Gas Purification Systems contain dual-resin beds, providing a continuous supply of purified gas without process interruption. These gas purification systems are capable of handling higher flow rates and longer duty cycles than cartridge purifiers. Our Extraction products include filter housings and hybrid media chemical air filters which purify air entering exposure tool and process tool enclosures and remove airborne molecular contaminants.

MICROENVIRONMENT PRODUCTS

Our microenvironment products fall into three sub-categories, wafer handling products, wafer shipping products and data storage products.

Wafer Handling Products. We believe that we are a market leader in wafer handling products. We offer a wide variety of products that hold and position wafers as they travel between each piece of equipment used in the automated manufacturing process. These specialized carriers provide precise wafer positioning, wafer protection and highly reliable and predictable cassette interfaces in automated fabs. Semiconductor manufacturers rely on our products to improve yields by protecting wafers from abrasion, degradation and contamination during the manufacturing process. We provide standard and customized products that meet the full spectrum of industry

standards and customers' wafer handling needs including FOUPs, wafer transport and process carriers, SMIF pods and work-in-process boxes. To meet our customers' varying wafer processing and transport needs, we offer wafer carriers in a variety of materials and in sizes ranging from 100 mm through 300 mm.

Wafer Shipping Products. We believe that we are a leading provider of critical shipping products that preserve the integrity of raw silicon wafers as they are transported from wafer manufacturers to semiconductor manufacturers. We lead the market with our extensive, high-volume line of Ultrapak ® and Crystalpak ® products which are supplied to wafer manufacturers in a full range of sizes covering 100, 125, 150 and 200 mm wafers. We also offer a full-pitch, front-opening shipping box, or FOSB, for the transportation and automated interface of 300 mm wafers. We offer a complete shipping system, including both wafer shipping containers as well as secondary packaging that provides another level of protection for wafers.

We believe we are the only global provider currently offering outsourcing programs for wafer and device transportation and protection for both wafer manufacturing and wafer handling products. Our Wafercare ® and DeviceCare SM services include product cleaning, certified re-use services for shipping products, on-site and off-site product maintenance and optimization, and end-of-life recycling for our wafer, device and disk-handling products. Re-use services can be customized depending on the customers needs to provide product cleaning, logistics, recovery, certification and supply solutions for our products.

Data Storage Products. As is the case with the semiconductor industry, the data storage market continues to face new challenges and deploy new technologies at an accelerating rate. We provide products and solutions to manage two critical sectors of this industry: magnetic disks and the read/write heads used to read and write today's higher density disks. Because both of these hard disk drive components are instrumental in the transition to more powerful storage solutions, we offer products that carefully protect and maintain the integrity of these components during their processing, storage and shipment. Our product offerings for magnetic hard disk drives include process carriers, boxes, packages, tools and shippers for aluminum and other disk substrates. Our optical hard disk drive products include stamper cases, process carriers, boxes and glass master carriers. Our read/write head products include transport trays, carriers, handles, boxes, individual disk substrate packages and accessories.

Rapidly changing packaging strategies for semiconductor applications are creating new materials management challenges for back-end manufacturers. We offer chip and matrix trays as well as carriers for bare die handling and integrated circuits. Our materials management products are compatible with industry standards and available in a wide range of sizes with various feature sets. Our standard trays offer dimensional stability and permanent electrostatic discharge protection. Our trays also offer a number of features including custom designs to minimize die movement and contact; shelves and pedestals to minimize direct die contact, special pocket features to handle various surface finishes to eliminate die sticking; and other features for automated or manual die placement and removal. In addition, we support our product line with a full range of accessories to address specific needs such as static control, cleaning, chip washing and other related materials management requirements. To better address this market, we have established ictray.com, a website which allows new and existing customers to select from our full range of standard and custom integrated circuit trays.

Specialty Materials Products

Our specialty materials products fall into three sub-categories, Poco Graphite Products, Specialty Coating Products and Polymer Composites. These products all provide high-value materials science enabling solutions in the form of materials, components or services that provide corrosion, high temperature, wear and chemical resistance, electrical and thermal conductivity and biocompatibility to a wide range of customers both within the semiconductor industry and in adjacent and unrelated industries.

Poco Graphite Products. These products are made from specialized graphite or silicon carbide. Our Poco Graphite products sold to the semiconductor industry are used for critical components for semiconductor manufacturing equipment at various stages of the semiconductor manufacturing process including chemical

vapor deposition, where our expendable graphite chamber liners and shower heads are critical components used in the CVD chamber; wet etch and clean, where our consumable graphite components deliver, baffle and confine the process gases during the etch process; and ion implant, where our consumable graphite components are critical elements of ion implantation equipment. In addition, our Poco Graphite high-quality graphite is used as precision consumable electrodes for electrical discharge machining, a non-contact precision thermoelectric machining process for hard and exotic metals and other materials. Poco Graphite also manufactures a number of graphite hot glass contact materials for use in the manufacture of glass containers. Finally, Poco Graphite manufactures a number of graphite consumable products for various industrial applications including bushings and thrust washers for aerospace applications, substrates for industrial print heads, components for scan heads in industrial optical applications, cathodes for fuel cells and heart valves for human implantation.

Specialty Coatings. We offer a variety of high-performance specialty coatings for critical components used in semiconductor and other high-technology manufacturing operations. These components, often in highly complex geometries, are coated by means of a low-temperature, plasma-assisted chemical vapor deposition process to provide corrosion and abrasion resistance and desired conductivity and hydrophobicity properties. We also provide complex assemblies such as electrostatic chucks for semiconductor manufacturing equipment, where our coatings prevent contamination of the process. Our coatings are also used in other high-technology applications such as aerospace optical components.

Polymer Composite Products. We are pursuing a number of advanced materials initiatives to produce highly engineered, single wall and multi-wall carbon nanotube polymer composite materials that can be used in various products in the semiconductor and other high technology markets.

Worldwide Applications Development and Field Support Capabilities

We provide strong technical support to our customers through local service groups and engineers consisting of field applications engineers, technical service groups, applications development groups and training capabilities. Our field applications engineers, located in the United States and approximately ten other countries, work directly with our customers on product qualification and process improvements in their facilities. In addition, in response to customer needs for local technical service and fast turnaround time, we maintain regional applications laboratories. Our applications laboratories maintain process equipment that simulate customers' applications and industry test standards and provide product evaluation, technical support and complaint resolution for our customers.

Our Customers and Markets

Our major semiconductor customer groups include integrated circuit device manufacturers, original equipment manufacturers that provide equipment to integrated circuit device manufacturers, gas and chemical manufacturing companies and manufacturers of high-precision electronics. Our major non-semiconductor customers for our Poco Graphite products include electrical discharge machining customers, glass container manufacturers, aerospace manufacturers and manufacturers of biomedical implantation devices.

Our most significant customers based on sales in fiscal 2008 include industry leaders, such as ASML, MEMC, Samsung America Inc., ST Micro, Siltronic AG, SUMCO Oregon Corp., Taiwan Semiconductor Manufacturing Co. Ltd., Tokyo Electron and UMC Group. We also sell our products to flat panel display original equipment manufacturers, materials suppliers and end users. The major manufacturers for flat panel displays and flat panel display equipment are concentrated in Japan, Korea and other parts of Asia.

In 2008, 2007 and 2006, net sales to our top ten customers accounted for approximately 26%, 28% and 27%, respectively, of our net sales. During those same periods no single customer accounted for more than 10% of our net sales and international net sales represented approximately 71%, 74% and 71%, respectively, of our net sales. Over 3,600 customers purchased products from us during 2008.

We may enter into supply agreements with our customers to govern the conduct of our business with our customers, including the manufacture of our products. These agreements generally have a term of one to three years, but do not contain any long-term purchase commitments. Instead, we work closely with our customers to develop non-binding forecasts of the future volume of orders. However, customers may cancel their orders, change production quantities from forecasted volumes or delay production for a number of reasons beyond our control.

Sales and Marketing

We sell our products worldwide, primarily through our direct sales force located in offices in all major semiconductor markets, as well as through independent distributors elsewhere. As of December 31, 2008, our sales and marketing force consisted of approximately 515 employees worldwide. Our direct sales force is supplemented by independent sales representatives and agents.

Our semiconductor marketing efforts focus on our "push/pull" marketing strategy in order to maximize our selling opportunities. We work with original equipment manufacturers to persuade them to design tools that require our products and we create end-user "pull" demand by persuading semiconductor manufacturers to specify our products. Our industry relationships have provided us with the opportunity for significant collaboration with our customers at the product design stage, which has facilitated our ability to introduce new products and applications that meet our customers' needs. In addition, we are constantly identifying for our customers the variety of analytical, purification and process control challenges that may be addressed by our products. Further, we adapt our products and technologies to resolve process control issues identified by our customers. Our sales representatives provide our customers with worldwide support and information about our products.

We believe that our technical support services are important to our marketing efforts. These services include assisting in defining a customer's needs, evaluating alternative products, designing a specific system to perform the desired separation, training users and assisting customers in compliance with relevant government regulations. In addition, we maintain a network of service centers located in the United States and in key international markets to support our products.

Competition

The market for our products is highly competitive. While price is an important factor, we compete primarily on the basis of the following factors:

- historical customer relationships;
- technical expertise;
- product quality and performance;
- total cost of ownership;
- customer service and support;
- breadth of product line;
- breadth of geographic presence;
- advanced manufacturing capabilities; and
- after-sales service.

We believe that we compete favorably with respect to all of the factors listed above, but we cannot assure you that we will continue to do so. We believe that our key competitive strengths include our broad product line, the low total cost of ownership of our products, our ability to provide our customers with quick order fulfillment and our technical expertise. However, our competitive position varies depending on the market segment and specific product areas within these segments. While we have longstanding relationships with a number of semiconductor and other electronic device manufacturers, we also face significant competition from companies that have longstanding relationships with other semiconductor and electronic device manufacturers and, as a result, have

been able to have their products specified by those customers for use in manufacturers' fabrication facilities. In the markets for our consumable products, we believe that our differentiated membrane and materials integrity management technologies, strong supply chain capabilities that allow us to provide our customers with quick order fulfillment, and technical expertise, which enables us to develop membranes to meet specific customer needs and assist our customers in improving the functionality of our membranes for particular applications, allow us to compete favorably. In these markets our competitors compete against us on the basis of price, as well as alternative membrane technology having different functionality, manufacturing capabilities and breadth of geographic presence.

The market for our products is highly fragmented, and we compete with a number of different companies. Our liquid filtration- control products compete with product offerings from a wide range of companies including both large companies such as Pall Corporation as well as small Asian filter manufacturers. Our contamination control components and systems also face worldwide competition from companies such as Saint-Gobain, Parker, Gemu, Donaldson and Iwaki Co., Ltd. Our gas filtration products compete with companies such as SAES Puregas and Mott Metallurgical Corporation. Our microenvironment product lines face competition largely on a product-by-product basis. We face competition from companies such as Miraial (formerly Kakizaki), Dainichi and Shin-Etsu Polymer and from regional suppliers such as e.PAK Resources Pte. Ltd. These companies compete with us primarily in 200 mm and 300 mm applications. Our data storage and finished electronic components products compete with companies such as ITW/Camtex, Peak International and 3M and from regional suppliers. Our Poco Graphite products compete with products manufactured by companies such as Carbone Lorraine (France), Tokai Carbon (Japan) and Toyo Tanso (Japan). Some of our competitors are larger and have greater resources than we do. In some cases, our competitors are smaller than us, but well-established in specific product niches. We believe that none of our competitors competes with us across all of our product offerings and that, within the markets that we serve, we offer a broader line of products, make use of a wider range of process control technologies and address a broader range of applications than any single competitor.

ENGINEERING, RESEARCH AND DEVELOPMENT

Our aggregate engineering, research and development expenses in 2008, 2007 and 2006 were $40.1 million, $39.7 million and $38.1 million, respectively. As of December 31, 2008, we had approximately 247 employees in engineering, research and development. In addition, we have followed a practice of supplementing our internal research and development efforts by licensing technology from unaffiliated third parties and/or acquiring distribution rights with respect thereto when we believe it is in our long-term interests to do so.

To meet the global needs of our customers, we have engineering, research and development capabilities in California, Minnesota, Massachusetts, Texas, Japan and Malaysia. Our engineering, research and development efforts are directed toward developing and improving our technology platforms for semiconductor and advanced processing applications and identifying and developing products for new applications for which fluid management plays a critical role.

We use sophisticated methodologies to research, develop and characterize our materials and products. Our materials technology laboratory is equipped to analyze the physical, rheological, thermal, chemical and compositional nature of the polymers we use. Our materials lab includes standard and advanced polymer analysis equipment such as inductively coupled plasma mass spectrometry (ICP/MS), inductively coupled plasma atomic emission spectrometry (ICP/AES), fourier transform infrared spectroscopy (FTIR) and automated thermal desorption gas chromatography/mass spectrometry (ATD-GC/MS). This advanced analysis equipment allows us to detect contaminants in materials that could harm the semiconductor manufacturing process to levels as low as parts per billion, and in many cases parts per trillion.

Our capabilities to test and characterize our materials and products are focused on continuously reducing risks and threats to the integrity of the critical materials that our customers use in their manufacturing processes. We expect that technology and product engineering, research and development will continue to represent an important element in our ability to develop and characterize our materials and products.

Key elements of our engineering, research and development expenditures over the past three years have included the development of new product platforms to meet the manufacturing needs for 90, 65, 45 and 32 nanometer semiconductor devices. Driven by the proliferation of new materials and chemicals in the manufacturing processes and increased needs for tighter process control for 300 mm wafers, investments were made for new contamination control products in the area of copper interconnects, deep ultra-violet (DUV) photolithography, and chemical and gas management technologies for advanced wafer cleans, deposition and etch equipment. Additional investments were made in the area of advanced process control, monitoring and diagnostics capabilities for future generations of semiconductor manufacturing processes. Our employees also work closely with our customers' development personnel. These relationships help us identify and define future technical needs on which to focus our engineering, research and development efforts. In addition, we participate in Semiconductor Equipment and Materials International (SEMI), a consortium of semiconductor equipment suppliers. We also support research at academic and other institutions targeted at advances in materials science and semiconductor process development.

Manufacturing

Our customers rely on our products to assure the integrity of the critical materials used in their manufacturing processes by providing dimensional precision and stability, cleanliness and consistent performance. Our ability to meet our customers' expectations, combined with our substantial investments in worldwide manufacturing capacity, position us to respond to the increasing materials integrity management demands of the microelectronics industry and other industries that require similar levels of materials integrity.

To meet our customer needs worldwide, we have established an extensive global manufacturing network with manufacturing facilities in the United States, Japan and Malaysia. Because we work in an industry where contamination control is paramount, we maintain Class 100 to Class 10,000 cleanrooms for manufacturing and assembly. We believe that our worldwide manufacturing operations and our advanced manufacturing capabilities are important competitive advantages. Our advanced manufacturing capabilities include:

- ***Injection Molding.*** Our manufacturing expertise is based on our long experience with injection molding. Using molds produced from computer-aided processes, our manufacturing technicians utilize specialized injection molding equipment and operate within specific protocols and procedures established to consistently produce precision products.
- ***Extrusion.*** Extrusion is accomplished through the use of heat and force from a screw to melt solid polymer pellets in a cylinder and then forcing the resulting melt through a die to produce tubing and pipe. We have established contamination-free on-line laser marking and measurement techniques to properly identify products during the extrusion process and ensure consistency in overall dimension and wall thickness. In addition, we use extrusion technology to extrude a polymer mix into flat sheet and hollow fiber membranes.
- ***Blow Molding.*** Blow molding consists of the use of heat and force from a screw to melt solid polymer pellets in a cylinder and then forcing the resulting melt through a die to create a hollow tube. The molten tube is clamped in a mold and expanded with pressurized gas until it takes the shape of the mold. We utilize advanced three-layer processing to manufacture 55 gallon drums, leading to cost savings while simultaneously assuring durability, strength and purity.
- ***Rotational Molding.*** Rotational molding is accomplished by the placing of a solid polymer powder in a mold, placing the mold in an oven and rotating the mold on two axes so that the melting polymer coats the entire surface of the mold. This forms a part in the shape of the mold upon cooling. We use rotational molding in manufacturing containers up to 5,000 liters. Our rotational molding expertise has provided rapid market access for our current fluoropolymer sheet lining manufacturing business.
- ***Compression Molding.*** In compression molding, thermoset polymers are processed. Today, we use this manufacturing process primarily for manufacturing bipolar plates and end-plates for the fuel cell market. We use the same expertise as in injection molding to assure a consistently produced precision product.

- ***Membrane Casting.*** We cast membrane by extruding a polymer into flat sheet or hollow fiber format that is passed through a chamber with controlled atmospheric conditions to control the development of voids or pores in the membrane. Once cast, the membrane is subjected to solvent extraction and annealing steps. The various properties of the membranes that we offer are developed during subsequent process steps.
- ***Cartridge Manufacturing.*** We fabricate the membrane we manufacture as well as membranes manufactured by others into finished filtration cartridges in a variety of configurations. The fabrication process involves membrane processing into pleated and other configurations around a central core and enclosing it in a framework of end caps and protective screening for use in fabricated cartridge housings. We also manufacture filter cartridges that are integrated into their own housings and incorporate our patented Connectology™ quick connect technology.
- ***Graphite Synthesis.*** We have a differentiated proprietary graphite synthesis process that produces premium graphite with superior strength, uniformity and performance. This synthesis process consists of blending and forming petroleum cokes into "green" billets, baking over an extended period between 800 to 1,100°C, followed by a graphitization process at temperatures between 2,000 to 3,000°C. The graphite produced by this process is sold in bulk, machined into specific components or converted into silicon carbide through controlled exposure to silicon monoxide gas.
- ***Machining.*** Machining consists of the use of computer-controlled equipment to create shapes, such as valve bodies and other specific components, out of solid polymer blocks or rods, premium graphite and silicon carbide. Our computerized machining capabilities enable speed and repeatability in volume manufacturing of our machined products, particularly products utilized in chemical delivery applications.
- ***Assembly.*** We have established protocols, flow charts, work instructions and quality assurance procedures to assure proper assembly of component parts. The extensive use of robotics throughout our facilities reduces labor costs, diminishes the possibility of contamination and assures process consistency.
- ***Tool Making.*** We employ approximately 60 tool development and tool-making staff at locations in the United States and Malaysia. Our toolmakers produce the majority of the tools we use throughout the world.

We have made significant investments in systems and equipment to create innovative products and tool designs. Our computer-aided design (CAD) equipment allows us to develop three-dimensional electronic models of desired customer products to guide design and tool-making activities. Our CAD equipment also aids in the rapid prototyping of products.

We also use computer-automated engineering in the context of mold flow analysis. Beginning with a three-dimensional CAD model, mold flow analysis is used to visualize and simulate how our molds will fill. The mold flow analysis techniques cut the time needed to bring a new product to market because of the reduced need for sampling and development. Also, our CAD equipment can create a virtual part with specific geometries, which drives subsequent tool design, tool manufacturing, mold flow analysis and performance simulation.

In conjunction with our three-dimensional product designs, we use finite element analysis software to simulate the application of a variety of forces or pressures to observe what will happen during product use. This analysis helps us anticipate forces that affect our products under various conditions. The program also assists our product designers by measuring anticipated stresses against known material strengths and establishing proper margins of safety.

Patents and Other Intellectual Property Rights

We rely on a combination of patent, copyright, trademark and trade secret laws and license agreements to establish and protect our proprietary rights. As of February 1, 2009 our patent portfolio included 280 current U.S. patents, 508 current foreign patents, including counterparts to U.S. filings, 75 pending U.S. patent applications, 19 pending filings under the Patent Cooperation Treaty not yet nationalized and 543 pending foreign patent applications. While we believe that patents may be important for aspects of our business, we believe that our

success also depends more upon close customer contact, innovation, technological expertise, responsiveness and worldwide distribution. Additionally, while our patented technology may delay or deter a competitor in offering a competing product, we do not believe that our patent portfolio functions as a barrier to entry for any of our competitors. In addition, while we license and will continue to license technology used in the manufacture and distribution of products from third parties, except as described below, these licenses are not currently related to any of our core product technology. In connection with the separation of Mykrolis from Millipore Corporation, Mykrolis was granted licenses to certain Millipore technology. Our use of Millipore's technology is governed by the agreements governing the separation of Mykrolis from Millipore, which prohibit our use of Millipore's technology in fields of use outside the microelectronics industry. In general, where technology is used both by Millipore in the manufacture of its products and by us in the manufacture of our products, Millipore retained ownership of the technology and granted us a license to use the technology, limited to fields of use in the microelectronics industry. These restrictions could limit our ability to expand our business into markets outside the microelectronics industry, which could limit our growth.

We require each of our employees, including our executive officers, to enter into standard agreements pursuant to which the employee agrees to keep confidential all of our proprietary information and to assign to us all inventions made while employed by us.

The patent position of any manufacturer, including us, is subject to uncertainties and may involve complex legal and factual issues. Litigation is currently necessary and will likely be necessary in the future to enforce our patents and other intellectual property rights or to defend ourselves against claims of infringement or invalidity. The steps that we have taken in seeking patents and other intellectual property protections may prove inadequate to deter misappropriation of our technology and information. In addition, our competitors may independently develop technologies that are substantially equivalent or superior to our technology.

Governmental Regulation

Our operations are subject to federal, state and local regulatory requirements relating to environmental, waste management and health and safety matters, including measures relating to the release, use, storage, treatment, transportation, discharge, disposal and remediation of contaminants, hazardous substances and wastes, as well as practices and procedures applicable to the construction and operation of our plants. There can be no assurance that we will not incur material costs and liabilities or that our past or future operations will not result in exposure to injury or claims of injury by employees or the public. Although some risk of costs and liabilities related to these matters is inherent in our business, as with many similar businesses, we believe that our business is operated in substantial compliance with applicable regulations. However, new, modified or more stringent requirements or enforcement policies could be adopted, which could adversely affect us. While we expect that capital expenditures will be necessary to assure that any new manufacturing facility is in compliance with environmental and health and safety laws, we do not expect these expenditures to be material. Otherwise, we are not presently aware of any facts or circumstances that would cause us to incur significant liabilities in the future related to environmental, health and safety law compliance.

Employees

As of February 1, 2009, we had approximately 2,829 full-time employees, including approximately 247 in engineering, research and development and approximately 515 in sales and marketing, as well as approximately 396 temporary employees. Given the variability of business cycles in the semiconductor industry and the quick response time required by our customers, it is critical that we be able to quickly adjust the size of our production staff to maximize efficiency. Therefore, we use skilled temporary labor as required.

None of our employees are represented by a labor union or covered by a collective bargaining agreement other than statutorily mandated programs in European countries.

Information About Our Operating Segment

For 2008, 2007 and 2006, the Company operated in one reportable business segment that develops, manufactures and sells consumables and capital equipment products to semiconductor manufacturing companies and other companies using similar manufacturing processes, as well as OEM suppliers to those companies. In 2008, 2007 and 2006 approximately 71%, 74% and 71%, respectively, of our net sales were made to customers outside North America. Industry and geographic segment information is discussed in Note 21 to the Entegris, Inc. Consolidated Financial Statements (the "Financial Statements") included in response to Item 8 below, which Note is incorporated herein by reference.

Other Information

On July 27, 2005, our Board of Directors adopted a shareholder rights plan (the "Rights Plan") pursuant to which Entegris declared a dividend on August 8, 2005 to its shareholders of record on that date of one preferred share purchase right (a "Right") for each share of Entegris common stock owned on August 8, 2005. Each Right entitles the holder to purchase one-hundredth of a share of a series of preferred stock at an exercise price of $50, subject to adjustment as provided in the Rights Plan. The Rights Plan is designed to protect Entegris' shareholders from attempts by others to acquire Entegris on terms or by using tactics that could deny all shareholders the opportunity to realize the full value of their investment. The Rights are attached to the shares of our common stock until certain triggering events specified in the Rights Agreement occur, including, unless approved by our board of directors, an acquisition by a person or group of specified levels of beneficial ownership of our common stock or a tender offer for our common stock. Upon the occurrence of any of these triggering events, the Rights authorize the holders to purchase at the then-current exercise price for the Rights that number of shares of our common stock having a market value equal to twice the exercise price. The Rights are redeemable by us for $0.01 and will expire on August 8, 2015. One of the events that would trigger the Rights is the acquisition, or commencement of a tender offer, by a person (an Acquiring Person, as defined in the shareholder rights plan), other than Entegris or any of our subsidiaries or employee benefit plans, of 15% or more of the outstanding shares of our common stock. An Acquiring Person may not exercise a Right.

Entegris' products are made from a wide variety of raw materials that are generally available in quantity from alternate sources of supply. However, certain materials included in the Company's products, such as polymer resins, petroleum coke and certain filtration membranes, are obtained from a single source or a limited group of suppliers. Although the Company seeks to reduce dependence on these sole and limited source suppliers, the partial or complete loss of these sources could interrupt our manufacturing operations and result in an adverse effect on the Company's results of operations. Furthermore, a significant increase in the price of one or more of these components could also adversely affect the Company's results of operations.

Our History

Effective August 6, 2005 Entegris, Inc., a Minnesota corporation, and Mykrolis Corporation, a Delaware corporation, completed a strategic merger of equals transaction, pursuant to which they were each merged into the Company to carry on the combined businesses. We were incorporated in Delaware in March 2005 under the name Eagle DE, Inc. as a wholly owned subsidiary of Entegris Minnesota. Effective August 6, 2005 Entegris Minnesota merged into us in a reincorporation merger of which we were the surviving corporation. Immediately following that merger, Mykrolis merged into us and our name was changed to Entegris, Inc. Our stock is traded on the NASDAQ National Market System under the symbol "ENTG".

Entegris Minnesota was incorporated in June 1999 to effect the business combination of Fluoroware, Inc., which began operating in 1966, and EMPAK, Inc., which began operating in 1980. On July 10, 2000 Entegris Minnesota completed an initial public offering of approximately 19% of the total shares of the Company's common stock outstanding.

Mykrolis was organized as a Delaware corporation on October 16, 2000 under the name Millipore MicroElectronics, Inc. in connection with the spin-off by Millipore Corporation of its microelectronics business

unit. On March 31, 2001, Millipore effected the separation of the Mykrolis business from Millipore's business by transferring to Mykrolis substantially all of the assets and liabilities associated with its microelectronics business. On August 9, 2001 Mykrolis completed an initial public offering of approximately 18% of the total shares of the Company's common stock outstanding. On February 27, 2002, Millipore completed the spin-off of Mykrolis by distributing to its stockholders the 82% of the Mykrolis common stock that it held following the Mykrolis initial public offering.

EXECUTIVE OFFICERS

The following is a list, as of December 31, 2008, of our Executive Officers. All of the Executive Officers listed below were elected to serve until the first Directors Meeting following the 2009 Annual Stockholders Meeting.

Name	Age	Office	First Elected To Office*
CORPORATE OFFICERS			
Gideon Argov	52	*President & Chief Executive Officer*	2004
Gregory B. Graves	48	*Executive Vice President, Chief Financial Officer & Treasurer*	2002
Bertrand Loy	43	*Executive Vice President & Chief Operating Officer*	2001
Peter W. Walcott	62	*Senior Vice President, Secretary & General Counsel*	2001
John J. Murphy	56	*Senior Vice President Human Resources*	2005
John Goodman	48	*Senior Vice President Chief Technology & Innovation Officer*	2005

* With either the Company or a predecessor company

Gideon Argov has been our President and Chief Executive Officer and a director since the effectiveness of our merger with Mykrolis. He served as the Chief Executive Officer and a director of Mykrolis since November 2004. Prior to joining Mykrolis, Mr. Argov was a Special Limited Partner at Parthenon Capital, a Boston-based private equity partnership, since 2001. He served as Chairman, Chief Executive Officer and President of Kollmorgen Corporation from 1991 to 2000. From 1988 to 1991 he served as Chief Executive Officer of High Voltage Engineering Corporation. Prior to 1988, he led consulting engagement teams at Bain and Company. He is a director of Interline Brands, Inc., X-Rite Incorporated and Fundtech Corporation.

Gregory B. Graves has served as our Executive Vice President and Chief Financial Officer since July 2008. Prior to that he served as Senior Vice President and Chief Financial Officer since April 2007. Prior to April 2007, he served as Senior Vice President, Strategic Planning & Business Development since the effectiveness of the merger with Mykrolis. Mr. Graves served as the Chief Business Development Officer of Entegris Minnesota since September 2002 and from September 2003 until August 2004 he also served as Senior Vice President of Finance. Prior to joining Entegris Minnesota, Mr. Graves held positions in investment banking and corporate development, including at U.S. Bancorp Piper Jaffray from June 1998 to August 2002 and at Dain Rauscher from October 1996 to May 1998.

Bertrand Loy served as our Executive Vice President and Chief Administrative Officer from the effectiveness of the merger with Mykrolis until July 2008, when he assumed his current position as Chief Operating Officer. He served as the Vice President and Chief Financial Officer of Mykrolis from January 2001 until the Merger. Prior to that, Mr. Loy served as the Chief Information Officer of Millipore from April 1999 until December 2000. From 1995 until 1999, he served as the Division Controller for Millipore's Laboratory Water Division. From 1989 until 1995, Mr. Loy served Sandoz Pharmaceuticals (now Novartis) in a variety of financial, audit and controller positions located in Europe, Central America and Japan.

Peter W. Walcott has been our Senior Vice President, Secretary and General Counsel since the effectiveness of the merger with Mykrolis. He served as the Vice President, Secretary and General Counsel of Mykrolis since October 2000. Mr. Walcott served as the Assistant General Counsel of Millipore from 1981 until March 2001.

John J. Murphy joined us as our Senior Vice President, Human Resources in October of 2005. He served as the Senior Vice President Human Resources of HNTB, an engineering and architectural services firm from February 2004 until October 2005 and as Corporate Vice President, Human Resources of Cadence Design Systems, Inc. from May of 2000 through October 2003. Prior to that Mr. Murphy held senior human resources positions with L.M. Ericsson Telephone Company and with General Electric Company.

John Goodman has been our Senior Vice President, Chief Technology & Innovation Officer since the effectiveness of the merger with Mykrolis. He served as the Managing Director of the fuel cell market sector of Entegris Minnesota since January 2005 and prior to that as president of the fuel cell market sector since June 2002. Mr. Goodman served as Executive Vice President and Chief Technology Officer of Entegris Minnesota from 1999 to 2002. Prior to that time, Mr. Goodman held a variety of positions with Fluoroware (a predecessor to Entegris Minnesota) since 1982.

CORPORATE GOVERNANCE

At their first meeting following the Merger, on August 10, 2005, our Board of Directors adopted a code of business ethics, The Entegris Code of Business Ethics, applicable to all of our executives, directors and employees as well as a set of corporate governance guidelines. The Entegris Code of Business Ethics, the Governance Guidelines and the charters for our Audit & Finance Committee, Governance & Nominating Committee and our Management Development & Compensation Committee all appear on our website at http://www.Entegris.com under "Investor Relations—Governance". The Governance Guidelines and committee charters are also available in print to any shareholder that requests a copy. Copies may be obtained by contacting Peter W. Walcott, our Senior Vice President, Secretary and General Counsel through our corporate headquarters.

Item 1A. Risk Factors.

Risks Relating to our Business and Industry

The current industry downturn is negatively impacting our business with significant revenue declines in the fourth quarter of 2008 and a worsening of those declines through the first seven weeks of 2009.

We had a net loss of $517.0 million in fiscal 2008, including a fourth quarter net loss of $131.7 million, which included after-tax goodwill impairment charges of $454.6 million and $89.4 million, respectively. Revenues declined sharply in the fourth quarter of 2008 to $112.7 million down from $145.8 million in the third quarter 2008 and from $161.3 million in the fourth quarter of 2007. The revenue run rate for the first seven weeks of 2009 is down significantly from what we experienced in the fourth quarter of 2008. As a result of this poor business environment, we projected that we would violate the debt covenants in our $230 revolving credit facility in the first half of 2009. Therefore, management, working with our banks, undertook amending our $230 million revolving credit facility. On March 2, 2009 we entered into a $150 million amended revolving credit facility. The $150 million amended revolving credit facility allows us to borrow up to $139 million based on our current borrowing base with an additional $11 million available at the discretion of the majority of our banks. As of December 31, 2008 and February 27, 2009, we have $139 million outstanding. The amended revolving credit facility requires us to maintain compliance with new debt covenants and to pay higher rates of interest (see Note 23 to our consolidated financial statements).

While management has taken significant action to date including the announcement of the closure of our largest Chaska facility that will ultimately result in the layoff of approximately 200 employees and the reduction of exempt employees' wages by an aggregate annual amount in excess of $5.0 million, further actions will be necessary if revenue levels do not improve in the very near term. At current 2009 revenue levels, management

will be required to act upon its identified contingency plan to significantly reduce operating expenses further in order to avoid violating the covenants in our $150 million amended revolving credit facility. These reductions, if necessary, would include such items as furloughs, permanent headcount reductions, office closures, further reductions in discretionary spending, elimination of certain new product development initiatives and other cost reduction measures. Certain of the contingency plan actions may likely need to be implemented late in the first quarter to realize the financial benefits necessary to maintain compliance with our debt covenants. While there can be no assurances that these actions will be sufficient, such contingency plans are within management's control. Further, management has the intent and ability to execute as necessary and believes such benefits are achievable. However, there can be no assurance that these additional operating expense reductions will not have a lasting negative impact on our long term business prospects. Additionally, these actions could have direct or indirect negative effects on certain other risk factors below.

The semiconductor industry has historically been highly cyclical, and industry downturns reduce revenue and profits.

Our business depends on the purchasing patterns of semiconductor manufacturers, which, in turn, depend on the current and anticipated demand for semiconductors and products utilizing semiconductors. The semiconductor industry has historically been highly cyclical with periodic downturns, which often have resulted in decreased expenditures by semiconductor manufacturers. For example, we experienced considerably lower revenues during the industry's downturn in the 2001-2003 period. From 2003 to the middle of 2008, this cyclicality had moderated. However, it should be noted that even moderate cyclicality can cause our operating results to fluctuate significantly from one period to the next. Currently, we are experiencing significant revenue deterioration due to a severe downturn in both the capital and unit-driven segments of the semiconductor industry that began during the second half of 2008. We are unable to predict the ultimate duration and severity of this downturn or the timing of a recovery, if any, for the semiconductor industry.

Furthermore, in periods of reduced demand, we must continue to maintain a satisfactory level of engineering, research and development expenditures and continue to invest in our infrastructure. At the same time, we have to manage our operations to be able to respond to significant increases in demand. In addition, because we typically do not have significant backlog, changes in order patterns have a more immediate impact on our revenues. We expect the semiconductor industry to continue to be cyclical. During downturns our revenue is reduced, and there is likely to be an increase in pricing pressure, affecting both gross margin and net income. Such fluctuations in our results could cause our share price to decline. We believe that period-to-period comparisons of our results of operations may not be meaningful, and you should not rely upon them as indicators of our future performance.

The semiconductor industry is subject to rapid demand shifts, which are difficult to predict. As a result, our inability to meet demand in response to these rapid shifts may cause a reduction in our market share.

Our ability to increase sales of our products, particularly our capital equipment products, depends in part upon our ability to ramp up the use of our manufacturing capacity for such products in a timely manner and to mobilize our supply chain. In order to meet the demands of our customers, we may be required to ramp up our manufacturing capacity in as little as a few months. If we are unable to expand our manufacturing capacity on a timely basis or manage such expansion effectively, our customers could seek such products from other suppliers, and our market share could be reduced. Because demand shifts in the semiconductor industry are rapid and difficult to foresee, we may not be able to increase capacity quickly enough to respond to such an increase in demand.

Our annual and quarterly operating results are subject to fluctuations as a result of rapid demand shifts and our insignificant level of backlog, and if we fail to meet the expectations of securities analysts or investors, the market price of our securities may decrease significantly.

Our sales and profitability can vary significantly from quarter to quarter and year to year. Because our expense levels are relatively fixed in the short-term, an unanticipated decline in revenue in a particular quarter could disproportionately affect our net income in that quarter. In addition, we make a substantial portion of our

shipments shortly after we receive the order, and therefore we operate with a relatively modest level of backlog. As a consequence of the just-in-time nature of shipments and the modest level of backlog, our results of operations may decline quickly and significantly in response to changes in order patterns or rapid decreases in demand for our products. We anticipate that fluctuations in operating results will continue in the future. Such fluctuations in our results could cause us to fail to meet the expectations of securities analysts or investors, which could cause the market price of our securities to decline substantially. We believe that period-to-period comparisons of our results of operations may not be meaningful, and you should not rely upon them as indicators of our future performance.

We may not be able to accurately forecast demand for our products.

As noted above, we typically operate our business on a just-in-time shipment basis with a modest level of backlog and we order supplies and plan production based on internal forecasts of demand. Due to these factors, we have, in the past, and may again in the future, fail to accurately forecast demand for our products, in terms of both volume and specific products for which there will be demand. This has led to, and may in the future lead to, delays in product shipments, disappointment of customer expectations, or, alternatively, an increased risk of excess inventory and of inventory obsolescence. If we fail to accurately forecast demand for our products, our business, financial condition and operating results could be materially and adversely affected.

Semiconductor industry up-cycles may not reach historic levels but instead may reflect a lower rate of long-term growth, similar to the electronics industry.

Notwithstanding the severe and prolonged downturn in the semiconductor industry and the related reduction in manufacturing operations during the period 2001 to 2003 as well as during the current period, there may still be excess manufacturing capacity. In addition, there is no new high-opportunity application to drive growth in the semiconductor industry, as was the case in 1998 with telecommunications and Internet applications. Accordingly, some analysts have predicted that the semiconductor industry may experience lower growth rates during a recovery cycle than has historically been the case and that its longer-term performance may reflect this lower growth rate, which would be similar to the growth rate of the electronics industry. For example, we are currently experiencing a severe downturn comparable to the 2001—2003 downturn; we are unable to predict the duration or ultimate severity of this downturn or the growth rate of any recovery cycle that may follow.

If we are unable to maintain our technological expertise in design and manufacturing processes, we will not be able to successfully compete.

The microelectronics industry is subject to rapid technological change, changing customer requirements and frequent new product introductions. Because of this, the life cycle of our products is difficult to determine. We believe that our future success will depend upon our ability to develop and provide products that meet the changing needs of our customers, including the transition from the use of 200 millimeter wafers to 300 millimeter wafers, the shrinking of integrated circuit line-widths and the use of new classes of materials, such as copper, titanium nitride and organic and inorganic dielectric materials, which are materials that have either a low or high resistance to the flow of electricity. This requires that we successfully anticipate and respond to technological changes in manufacturing processes in a cost-effective and timely manner. Any inability to develop the technical specifications for any of our new products or enhancements to our existing products or to manufacture and ship these products or enhancements in volume in a timely manner could harm our business prospects and significantly reduce our sales. In addition, if new products have reliability or quality problems, we may experience reduced orders, higher manufacturing costs, delays in acceptance and payment, additional service and warranty expense and damage to our reputation.

Because our sales are somewhat concentrated on a small number of key customers, our revenue and profitability may materially decline if one or more of our key customers do not continue to purchase our existing and new products in significant quantities.

We depend and expect to continue to depend on a limited number of customers for a large portion of our business, and changes in several customers' orders could have a significant impact on our operating results. Our

top ten customers accounted for 26%, 28% and 27%, of our net sales in 2008, 2007 and 2006, respectively. If any one of our key customers decides to purchase significantly less from us or to terminate its relationship with us, our revenue and profitability may decline significantly. We could also lose our key customers or significant sales to our key customers because of factors beyond our control, such as a significant disruption in our customers' businesses generally or in a specific product line. These customers may stop incorporating our products into their products with limited notice to us and suffer little or no penalty for doing so. In addition, if any of our customers merge, we may experience lower overall sales from the merged companies. Because one of our strategies has been to develop long-term relationships with key customers in the product areas in which we focus, and because we have a long product design and development cycle for most of our products and prospective customers typically require lengthy product qualification periods prior to placing volume orders, we may be unable to replace these customers quickly or at all.

Because we are subject to order and shipment uncertainties and many of our costs are fixed, any significant changes, cancellations or deferrals of orders or shipments could cause our revenue and profitability to decline or fluctuate.

As is typical in the microelectronics industry, we do not usually obtain long-term purchase orders or commitments from our customers. Instead, we work closely with our customers to develop non-binding forecasts of the future volume of orders. Customers may cancel their orders, change production quantities from forecasted volumes or delay production for reasons beyond our control. Order cancellations or deferrals could cause us to hold inventory for longer than anticipated, which could reduce our profitability, restrict our ability to fund our operations and cause us to incur unanticipated reductions or delays in our revenue. Our customers often change their orders multiple times between initial order and delivery. Such changes usually relate to quantities or delivery dates, but sometimes relate to the specifications of the products we are supplying. If a customer does not timely pay for these products, we could incur significant charges against our income. In addition, our profitability may be affected by the generally fixed nature of our costs. Because a substantial portion of our costs is fixed, we may experience deterioration in gross margins when volumes decline. From time to time, we make capital investments in anticipation of future business opportunities. If we are unable to obtain the anticipated business, our revenue and profitability may decline.

Competition from existing or new companies in the microelectronics industry could cause us to experience downward pressure on prices, fewer customer orders, reduced margins, the inability to take advantage of new business opportunities and the loss of market share.

We operate in a highly competitive industry. We compete against many domestic and foreign companies that have substantially greater manufacturing, financial, research and development and marketing resources than we do. In addition, some of our competitors may have more developed relationships with our existing customers than we do, which may enable them to have their products specified for use more frequently by these customers. We also face competition from the manufacturing operations of our current and potential customers, who continually evaluate the benefits of internal manufacturing versus outsourcing. As more original equipment manufacturers dispose of their manufacturing operations and increase the outsourcing of their products to liquid and gas delivery system and other component companies, we may face increasing competitive pressures to grow our business in order to maintain our market share. If we are unable to maintain our competitive position, we could experience downward pressure on prices, fewer customer orders, reduced margins, the inability to take advantage of new business opportunities and a loss of market share. Further, we expect that existing and new competitors will improve the design of their existing products and will introduce new products with enhanced performance characteristics. The introduction of new products or more efficient production of existing products by our competitors could diminish our market share and increase pricing pressure on our products. Further, customers continue to demand lower prices, shorter delivery times and enhanced product capability. If we do not respond adequately to such pressures, we could lose customers or orders. If we are unable to compete successfully, we could experience pricing pressures, reduced gross margins and order cancellations.

Lack of market acceptance of our 300 mm shipper products as well as our other products could continue to harm our operating results.

The growing trend toward the use of 300 mm wafers has contributed to the increasing complexity of the semiconductor manufacturing process. The greater diameter of these wafers requires higher tooling costs and presents more complex handling, storage and transportation challenges. We have made substantial investments to complete a full line of 300 mm wafer shipping products, but there is no guarantee that our customers will adopt our 300 mm wafer shipping product lines as they convert existing 200 mm wafer fabrication facilities to the fabrication of 300 mm wafers or build new 300 mm wafer fabrication facilities, and sales of our shipping products for these applications has in the past and could continue in the future to be minimal and we might not recover our development costs.

Semiconductor and other electronic device manufacturers may direct semiconductor capital equipment manufacturers to use a specified supplier's product in their equipment. Accordingly, our success depends in part on our ability to have semiconductor and other electronic device manufacturers specify that our products be used at their fabrication facilities. Some of our competitors may have more developed relationships with semiconductor and other electronic device manufacturers, which enable them to have their products specified for use in manufacturers' fabrication facilities.

We may acquire other businesses, form joint ventures or divest businesses that could negatively affect our profitability, increase our debt and dilute your ownership of our company.

As part of our business strategy, we have, and we expect to continue to address gaps in our product offerings, diversify into complementary product markets or pursue additional technology and customers through acquisitions, joint ventures or other types of collaborations. We also expect to adjust our portfolio of businesses to meet our ongoing strategic objectives. As a result, we may enter markets in which we have no or limited prior experience and may encounter difficulties in divesting businesses that no longer meet our objectives. Competition for acquiring attractive businesses in our industry is substantial. In executing this part of our business strategy, we may experience difficulty in identifying suitable acquisition candidates or in completing selected transactions at appropriate valuations. Alternatively, we may be required to undertake multiple transactions at the same time in order to take advantage of acquisition opportunities that do arise; this could strain our ability to effectively execute and integrate these transactions. We consider a variety of financing alternatives for each acquisition which could include borrowing additional funds, reduction of our cash balances or issue of additional shares of our common stock to complete an acquisition. This could impair our liquidity and dilute your ownership of our company. Further, we may not be able to successfully integrate any acquisitions that we do make into our existing business operations and we could assume unknown or contingent liabilities or experience negative effects on our reported results of operations from dilutive results from operations and/or from future potential impairment of acquired assets including goodwill related to future acquisitions. We may experience difficulties in operating in foreign countries or over significant geographical distances and in retaining key employees or customers of an acquired business, and our management's attention could be diverted from other business issues. We may not identify or complete these transactions in a timely manner, on a cost-effective basis or at all, and we may not realize the benefits of any acquisition or joint venture.

Our amended credit agreement contains restrictions that limit our flexibility in operating our business.

Due to the economic downturn in our business we were projecting covenant violations in our $230 million revolving credit facility in the first half of 2009. Therefore, management, working with our banks, amended its revolving credit facility on March 2, 2009. Under our amended $150 million credit facility we are at a borrowing cap of $139 million. Our borrowing cap can be adjusted downward if our levels of qualifying US accounts receivable, inventories and value of our property plant and equipment were to decline from current levels. The remaining $11 million of the credit facility may not be borrowed unless a majority of the lenders consent. Total borrowings outstanding as of December 31, 2008 and February 27, 2009 was $139 million. In addition, our

amended credit facility contains various covenants that limit our ability to engage in specified types of transactions including, among other things our ability to:

- incur additional indebtedness;
- pay dividends on, repurchase or make distributions in respect of our capital stock or make other restricted payments;
- make certain investments or acquisitions;
- sell certain assets;
- create liens;
- materially change the nature and manner in which we conduct our business;
- consolidate, merge, sell or otherwise dispose of all or substantially all of our assets; and
- enter into certain transactions with our affiliates.

Further, if our future financial performance fails to meet certain financial covenants, then our lenders may terminate the amended credit facility and declare all amounts due, control of our cash receipts from the sale of products as well as certain of our other assets; in this event, our ability to conduct business could be severely impeded.

Our amended credit agreement contains financial covenants that we may not be able to meet.

Our amended credit agreement contains various financial covenants that limit our ability to purchase no more than $16 million in capital equipment in 2009 and no more than $20 million in 2010; requires that we maintain a minimum level of cash in the US; and achieve certain levels of EBITDA performance during 2009 and the first quarter of 2010.

During the first two months of 2009 our revenue levels have declined significantly from those we experienced during the fourth quarter of 2008 which has a negative impact on our ability to remain compliant with the EBITDA levels as required by our debt covenants. If our revenue continues at these levels for the balance of 2009, at our current operating expense levels we will violate the financial covenants of our amended credit agreement during 2009. In the event that revenue levels do not improve in the very near term, management will be required to act upon its identified contingency plan to significantly reduce operating expenses in order to avoid violating those covenants. These reductions, if necessary, would include such items as; furloughs, permanent headcount reductions, office closures, further reductions in discretionary spending, elimination of certain new product development initiatives and other cost reduction measures. Certain of the contingency plan actions may likely need to be implemented late in the first quarter to realize the financial benefits necessary to maintain our debt compliance. While there can be no assurances that these actions will be sufficient, such contingency plans are within its control. Further management has the intent and ability to execute as necessary and believes such benefits are achievable. There can be no assurance that these additional operating expense reductions will not have a lasting negative impact on our long term business prospects.

Our borrowings under our amended credit agreement leave us with a high degree of leverage.

A high degree of leverage could have important consequences for our business and your investment, including:

- increasing our vulnerability to adverse economic, industry or competitive developments;
- requiring a substantial portion of our cash flow from operations to be dedicated to the payment of principal and interest on our indebtedness, therefore reducing our ability to use our cash flow to fund our operations, capital expenditures and future business opportunities;
- exposing us to the risk of increased interest rates on our borrowings;

- making it more difficult for us to satisfy our obligations with respect to our indebtedness;
- restricting us from making strategic acquisitions or causing us to make non-strategic divestitures;
- limiting our ability to obtain additional financing for working capital, capital expenditures, product development, debt service requirements, acquisitions and general corporate or other purposes; and
- limiting our flexibility in planning for, or reacting to, changes in our business or market conditions and placing us at a competitive disadvantage compared to our competitors who are less highly leveraged and who therefore, may be able to take advantage of opportunities that our leverage prevents us from exploiting.

Manufacturing Risks

Our dependence on single and limited source suppliers could affect our ability to manufacture our products.

We rely on single or limited source suppliers for some plastic polymers and petroleum coke that are critical to the manufacturing of our products. At times, we have experienced a limited supply of certain polymers as well as the need to substitute polymers, resulting in delays, increased costs and the risks associated with qualifying new polymers with our customers. An industry-wide increase in demand for these polymers could affect the ability of our suppliers to provide sufficient quantities to us. If we are unable to obtain an adequate quantity of such supplies, our manufacturing operations may be interrupted.

In addition, suppliers may discontinue production of polymers specified in certain of our products, requiring us in some instances to certify an alternative with our customers. If we are unable to obtain an adequate quantity of such supplies for any of the above reasons, our manufacturing operations may be affected. Obtaining alternative sources would likely result in increased costs and shipping delays, which could decrease profitability and damage our relationships with current and potential customers.

Prices for polymers can vary widely. In the volatile oil price environment, some suppliers have added and may in the future add surcharges to the prices of the polymers we purchase. While we have long-term arrangements with certain key suppliers of polymers that fix our price for purchases up to specified quantities, if our polymer requirements exceed the quantities specified, we could be exposed to higher material costs. If the cost of polymers increases and we are unable to correspondingly increase the sales price of our products, our profit margins will decline.

Our graphite synthesis process requires petroleum coke that meets specified criteria. While there are multiple suppliers for this petroleum coke, the required criteria may cause the price of this petroleum coke to increase.

Our production processes are becoming increasingly complex, and our production could be disrupted if we are unable to avoid manufacturing difficulties.

Our manufacturing processes are complex and require the use of expensive and technologically sophisticated equipment and materials. These processes are frequently modified to improve manufacturing yields and product quality. We have, on occasion, experienced manufacturing difficulties, such as temporary shortages of raw materials and occasional critical equipment breakdowns that have delayed deliveries to customers. A number of our product lines are manufactured at only one or two facilities, and any disruption could impact our sales until another facility could commence or expand production of such products.

Our manufacturing operations are subject to numerous risks, including the introduction of impurities in the manufacturing process and other manufacturing difficulties that may not be well understood for an extended period of time and that could lower manufacturing yields and make our products unmarketable; the costs and

demands of managing and coordinating geographically diverse manufacturing facilities; and the disruption of production in one or more facilities as a result of a slowdown or shutdown in another facility. We could experience these or other manufacturing difficulties, which might result in a loss of customers and exposure to product liability claims.

We may lose sales if we are unable to timely procure, repair or replace capital equipment necessary to manufacture many of our products.

If our existing equipment fails, or we are unable to obtain new equipment quickly enough to satisfy any increased demand for our products, we may lose sales to competitors. In particular, we do not maintain duplicate tools or equipment for most of our important products. Fixing or replacing complex tools is time consuming, and we may not be able to replace a damaged tool in time to meet customer requirements. In addition, from time to time we may upgrade or add new manufacturing equipment that may require substantial lead times to build and qualify. Delays in building and qualifying new equipment could result in a disruption of our manufacturing processes and prevent us from meeting our customers' requirements so that they would seek other suppliers.

We incur significant cash outlays over long-term periods in order to research, develop, manufacture and market new products that may never reach market or may have limited market acceptance.

We make significant cash expenditures to engineer, research, develop and market new products. For example, we incurred $40.1 million, $39.7 million and $38.1 million of engineering, research and development expense in 2008, 2007 and 2006, respectively. The development period for a product can be as long as five years. Following development, it may take an additional two to three years for sales of that product to reach a substantial level. We cannot be certain of the success of a new product. A product concept may never progress beyond the development stage or may only achieve limited acceptance in the marketplace. If this occurs, we do not receive a direct return on our expenditures and may not even realize any indirect benefits. Additionally, capacity expansion may be necessary in order to manufacture a new product. If sales levels do not increase to offset the additional fixed operating expenses associated with any such expansion, our revenue and profitability could decline and our prospects could be harmed.

We are subject to a variety of environmental laws that could cause us to incur significant expenses.

In addition to other regulatory requirements affecting our business, we are subject to a variety of federal, state, local and foreign regulatory requirements relating to the use, disposal, clean-up of, and human exposure to, hazardous chemicals. We generate and handle materials that are considered hazardous waste under applicable law. Certain of our manufacturing operations require the discharge of substantial quantities of wastewater into publicly owned waste treatment works which require us to assure that our wastewater complies with volume and content limitations. If we fail to comply with any present or future regulations, we could be subject to future liabilities or the suspension of production. In addition, compliance with these or future laws could restrict our ability to expand our facilities or build new facilities or require us to acquire costly equipment, incur other significant expenses or modify our manufacturing processes.

We are continually evaluating our manufacturing operations within our plants in order to achieve efficiencies and gross margin improvements. If we are unable to successfully manage transfers or realignments of our manufacturing operations, our ability to deliver products to our customers could be disrupted and our business, financial condition and results of operations could be adversely affected.

In order to enhance the efficiency and cost effectiveness of our manufacturing operations, we expect to move several product lines from one of our plants to another and to consolidate manufacturing operations in our plants. For example, in the fourth quarter of 2008 we announced the closure of our largest North American plant, located in Chaska, Minnesota, and the transfer of its manufacturing activities to our Kulim, Malaysia and Colorado Springs, Colorado plants. Our product lines involve technically complex manufacturing processes that require

considerable expertise to operate. If we are unable to effect these transfers, realignments and consolidations in a systematic manner within established schedules or if we are unable to successfully operate relocated manufacturing processes in the destination plant, production may be disrupted and we may not be able to deliver these products to meet customer orders in a timely manner, which could harm our business.

Loss of our key personnel could hurt our business because of their experience in the microelectronics industry and their technological expertise. Similarly, our inability to attract and retain new qualified personnel could inhibit our ability to operate and grow our business successfully.

We depend on the services of our key senior executives and technological experts because of their experience in the microelectronics industry and their technical expertise. The loss of the services of one or several of our key employees or an inability to attract, train and retain qualified and skilled employees, specifically research and development and engineering personnel, could result in the loss of customers or otherwise inhibit our ability to operate and grow our business successfully. In the past and currently, during downturns in the semiconductor industry our predecessor companies have, and the Company has, had to impose salary reductions on senior employees and freeze or eliminate merit increases in an effort to maintain its financial position. These actions may have an adverse effect on employee loyalty and may make it more difficult for us to attract and retain key personnel.

If we are unable to protect our intellectual property rights, our business and prospects could be harmed.

Our future success and competitive position depend in part upon our ability to obtain and maintain proprietary technology used in our principal product families. We rely, in part, on patent, trade secret and trademark law to protect that technology. We routinely enter into confidentiality agreements with our employees. However, there can be no assurance that these agreements will not be breached, that we will have adequate remedies for any breach or that our confidential and proprietary information and technology will not be independently developed by or become otherwise known to third parties. We have obtained a number of patents relating to our products and have filed applications for additional patents. We cannot assure you that any of our pending patent applications will be approved, that we will develop additional proprietary technology that is patentable, that any patents owned by or issued to us will provide us with competitive advantages or that these patents will not be challenged by third parties. Patent filings by third parties, whether made before or after the date of our filings, could render our intellectual property less valuable. Competitors may misappropriate our intellectual property, and disputes as to ownership of intellectual property may arise. In addition, if we do not obtain sufficient international protection for our intellectual property, our competitiveness in international markets could be significantly impaired, which would limit our growth and future revenue. Furthermore, there can be no assurance that third parties will not design around our patents.

Protection of our intellectual property rights has and may continue to result in costly litigation.

We may from time to time be required to institute litigation in order to enforce our patents, copyrights or other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. Such litigation could result in substantial costs and diversion of resources and could negatively affect our sales, profitability and prospects regardless of whether we are able to successfully enforce our rights. For example, as described in Item 3, “Legal Proceedings,” below we are engaged in multiple patent litigations with Pall Corporation. We intend to prosecute and defend these cases vigorously and expect that these lawsuits will continue for extended periods of time and that we will incur substantial costs in pursuing them. In addition it may become necessary for us to initiate other costly patent litigation against this or other competitors in order to protect and/or perfect our intellectual property rights.

If we infringe on the proprietary technology of others, our business and prospects could be harmed.

Our commercial success will depend, in part, on our ability to avoid infringing or misappropriating any patents or other proprietary rights owned by third parties. If we are found to infringe or misappropriate a third party’s patent or other proprietary rights, we could be required to pay damages to such third party, alter our products or

processes, obtain a license from the third party or cease activities utilizing such proprietary rights, including making or selling products utilizing such proprietary rights. If we are required to obtain a license from a third party, there can be no assurance that we will be able to do so on commercially favorable terms, if at all.

International Risks

We conduct a significant amount of our sales activity and manufacturing efforts outside the United States, which subjects us to additional business risks and may cause our profitability to decline due to increased costs.

Sales to customers outside the United States accounted for approximately 71% of our net sales in 2008, 74% of our net sales in 2007, and 71% of our net sales in 2006. We anticipate that international sales will continue to account for a majority of our net sales. In addition, a number of our key domestic customers derive a significant portion of their revenues from sales in international markets. We also manufacture a significant portion of our products outside the United States and are dependent on international suppliers for many of our parts. We intend to continue to pursue opportunities in both sales and manufacturing internationally. Our international operations are subject to a number of risks and potential costs that could adversely affect our revenue and profitability, including:

- unexpected changes in regulatory requirements that could impose additional costs on our operations or limit our ability to operate our business;
- greater difficulty in collecting our accounts receivable and longer payment cycles than is typical in domestic operations;
- changes in labor conditions and difficulties in staffing and managing foreign operations;
- expense and complexity of complying with U.S. and foreign import and export regulations;
- liability for foreign taxes assessed at rates higher than those applicable to our domestic operations; and
- political and economic instability.

In the past, we have incurred costs or experienced disruptions due to the factors described above and expect to do so in the future. For example, our operations in Asia, and particularly Korea, Taiwan and Japan, have been negatively impacted in the past as a result of regional economic instability. In addition, Taiwan and Korea account for a growing portion of the world's semiconductor manufacturing. There have historically been strained relations between China and Taiwan and there are continuing tensions between North Korea and South Korea and the United States. Any adverse developments in those relations could significantly disrupt the worldwide production of semiconductors, which may lead to reduced sales of our products. Furthermore, we incur additional legal compliance costs associated with our international operations and could become subject to legal penalties in foreign countries if we do not comply with local laws and regulations, which may be substantially different from those in the United States. In many foreign countries it is common to engage in business practices that are prohibited by United States law applicable to us such as the Foreign Corrupt Practices Act. Although we implement policies and procedures designed to ensure compliance with these laws, there can be no assurance that all of our employees, contractors and agents, as well as those companies to which we outsource certain of our business operations, including those based in countries where practices that violate such United States laws may be customary, will not take actions in violation of our policies. Any such violation, even if prohibited by our policies, could have an adverse effect on our business.

Fluctuations in the value of the U.S. dollar in relation to other currencies may lead to lower net income and shareholders' equity or may cause us to raise prices, which could result in reduced net sales.

Foreign currency exchange rate fluctuations could have an adverse effect on our net sales, results of operations and shareholders' equity. Unfavorable foreign currency fluctuations against the U.S. dollar could require us to increase prices to foreign customers, which could result in lower net sales by us to such customers. Alternatively, if we do not adjust the prices for our products in response to unfavorable foreign currency fluctuations, our profitability could decline. In addition, sales made by our foreign subsidiaries will be denominated in the

currency of the country in which these products are sold, and the currency we receive in payment for such sales could be less valuable at the time of receipt versus the time of sale as a result of foreign currency exchange rate fluctuations.

As we seek to source more of the materials from which our products are made from foreign countries we may be subject to increased import duties.

In an effort to reduce the cost of our products or to obtain the highest quality materials, we expect that our purchases of raw materials and components from foreign countries will increase. Those of our products manufactured in the United States or other countries from these materials and components may consequently be burdened by import duties imposed by the U.S. or those other countries, and these additional costs may be substantial and may put our products at a competitive disadvantage.

An increased concentration of wafer manufacturing in Japan could result in lower sales of our wafer shipper products.

A large percentage of the world's 300 mm wafer manufacturing currently takes place in Japan. Our market share in Japan is currently lower than in other regions we serve. If we are not able to successfully operate our manufacturing capability and increase market share in Japan, we might not be able to maintain our global market share in wafer shipper products, especially if 300 mm wafer manufacturing in Japan increases.

Terrorist attacks, such as the attacks that occurred in New York and Washington, D.C. on September 11, 2001 and other acts of violence or war may affect the markets in which we operate and hurt our profitability.

Terrorist attacks may negatively affect our operations and your investment. There can be no assurance that there will not be future terrorist attacks against the United States or United States businesses. These attacks or armed conflicts may directly impact our physical facilities or those of our suppliers or customers. Our primary facilities include headquarters, research and development and manufacturing facilities in the United States; sales, research and development and manufacturing facilities in Japan and Malaysia; and sales and service facilities in Europe and Asia. Attacks may also disrupt the global insurance and reinsurance industries with the result that we may not be able to obtain insurance at historical terms and levels for our facilities. Furthermore, such attacks may make travel and the transportation of our supplies and products more difficult and more expensive and may ultimately affect the sales of our products in the United States and overseas. As a result of terrorism the United States may enter into additional armed conflicts, which could have a further impact on our domestic and international sales, our supply chain, our production capacity and our ability to deliver products to our customers. The consequences of these armed conflicts and the associated instability are unpredictable, and we may not be able to foresee events that could have an adverse effect on our business and your investment.

Risks Related to the Economy, Securities Markets and Ownership of our Securities

Volatility in the global economy could adversely affect results.

Financial markets in the United States, Europe and Asia have been experiencing extreme disruption in recent months, including, among other things, volatility in security prices, diminished liquidity and credit availability, rating downgrades of certain investments and declining valuation of others. Currently, these conditions have had a significant impact on our financial condition and results of operations. Further, there can be no assurance that there will not be further change, which could lead to further challenges in our business and negatively impact our financial results. The current tightening of credit in financial markets adversely affects the ability of our customers and suppliers to obtain financing for significant purchases and operations and could result in a decrease in orders and spending for our products and services. We are unable to predict with certainty the likely duration and severity of the current disruption in financial markets and adverse economic conditions and the effects they may have on our business and financial condition.

Because of the past volatility of our stock price and the stock price of predecessor companies, the price of our common stock in the future may likewise be volatile so that the ability to trade our common shares may be adversely affected and our ability to raise capital through future equity financing may be reduced.

The price of our common stock has been volatile in the past and may be volatile in the future. For example: in fiscal year 2008, the closing price of our stock on the NASDAQ National Market ranged from a low of $1.04 to a high of $8.76 and in fiscal year 2007, the closing price of our stock on the NASDAQ National Market ranged from a low of $7.87 to a high of $12.18. Our share price was $0.61 at February 27, 2009.

The trading price of our common shares is subject to significant volatility in response to various factors, some of which are beyond our control, including factors discussed elsewhere in this report and including the following: the failure to meet the published expectations of securities analysts; changes in financial estimates by securities analysts; press releases or announcements by, or changes in market values of, comparable companies; volatility in the markets for high-technology stocks, general stock market price and volume fluctuations, which are particularly common among securities of high-technology companies; stock market price and volume fluctuations attributable to inconsistent trading volume levels; additions or departures of key personnel; and involvement in or adverse results from litigation. These market fluctuations may cause the trading price of our common stock to decrease.

If our common stock continues to trade below book value and the business outlook does not improve or worsens, we could likely be required to record material impairment losses for our long-lived assets, including property, plant and equipment and our identifiable intangibles.

In accordance with SFAS No. 144, the Company reviews its long-lived assets whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. If the carrying amount of an asset or group of assets exceeds its fair value, the asset will be written down to its fair value. In connection with the triggering events discussed above, during the third and fourth quarters of fiscal year 2008 the Company determined that none of its long-lived assets were impaired for its asset groups. The determination was based on reviewing estimated undiscounted cash flows for the Company's asset groups, which were greater than their carrying values. As required under U.S. generally accepted accounting principles, the SFAS No. 144 impairment analysis occurred before the SFAS No. 142 goodwill impairment assessment.

The evaluation of the recoverability of long-lived assets requires the Company to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to, the identification of the asset group at the lowest level of independent cash flows and the primary asset of the group; and long-range forecasts of revenue, reflecting management's assessment of general economic and industry conditions, operating income, depreciation and amortization and working capital requirements.

Due to the inherent uncertainty involved in making these estimates, which are made in the current economic environment and plan for a recovery, actual results could differ from those estimates. In addition, changes in the underlying assumptions would have a significant impact on the conclusion that an asset group's carrying value is recoverable, or the determination of any impairment charge if it was determined that the asset values were indeed impaired.

Due to the decline in the Company's market capitalization and the uncertain economic environment within the semiconductor industry, the Company will continue to monitor circumstances and events in future periods to determine whether additional asset impairment testing is warranted. It is possible that in the future the Company may no longer be able to conclude that there is no impairment of its long-lived assets, nor can the Company provide assurance that material impairment charges of long-lived assets will not occur in future periods.

Changes effected by the Sarbanes-Oxley Act of 2002 and related SEC regulations have in the past and are likely to continue to increase our costs.

The Sarbanes-Oxley Act of 2002 required changes in some of our corporate governance, securities disclosure and compliance practices. In response to the requirements of that Act, the Securities and Exchange Commission and

the NASDAQ have promulgated new rules and listing standards covering a variety of subjects. Compliance with these rules and listing standards has increased our legal and financial and accounting costs, and we expect these increased costs to continue indefinitely. We also expect these developments to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be forced to accept reduced coverage or incur substantially higher costs to obtain coverage. Likewise, these developments may make it more difficult for us to attract and retain qualified members of our board of directors, particularly independent directors, or qualified executive officers.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results. As a result, current and potential stockholders could lose confidence in our financial reporting, which would harm our business and the trading price of our stock.

Effective internal controls are necessary for us to provide reliable financial reports. If we cannot provide reliable financial reports, our business and operating results could be harmed. We have in the past discovered, and may in the future discover, areas of our internal controls that need improvement. For example, during each of the years 2008, 2007 and 2006, a material weakness in internal control over financial reporting was identified. Each of these material weaknesses represented a reasonable possibility that a material misstatement of the Company's annual or interim financial statements would not have been prevented or detected. None of these material weaknesses required the restatement of any of our annual financial statements.

Any failure to implement and maintain improvements in the controls over our financial reporting, or difficulties encountered in the implementation of these improvements in our controls, could cause us to fail to meet our reporting obligations. Any failure to improve our internal controls to address the identified material weaknesses could also cause investors to lose confidence in our reported financial information, which could have a negative impact on the trading price of our stock.

Provisions in our charter documents, Delaware law and our shareholder rights plan may delay or prevent an acquisition of us, which could decrease the value of your shares.

Our certificate of incorporation and By-Laws, Delaware law and our shareholder rights plan contain provisions that could make it harder for a third party to acquire us without the consent of our board of directors. These provisions include limitations on actions by our stockholders by written consent. In addition, our board of directors has the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer. Our shareholder rights plan will permit our stockholders to purchase shares of our common stock at a 50% discount upon the occurrence of specified events, including the acquisition by anyone of 15% or more of our common stock, unless such event is approved by our board of directors. Delaware law also imposes restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock. Although we believe these provisions provide for an opportunity to receive a higher bid by requiring potential acquirers to negotiate with our board of directors, these provisions apply even if the offer may be considered beneficial by stockholders. If a change of control or change in management is delayed or prevented, the market price of our common stock could suffer.

Your percentage ownership in us may be diluted by future issuances of capital stock, which could reduce your influence over matters on which stockholders vote.

Subject to applicable NASDAQ standards, our board of directors has the authority, without action or vote of our stockholders, to issue all or any part of our authorized but unissued shares. Issuances of common stock or the exercise of employee and director stock options would dilute your percentage ownership interest, which will have the effect of reducing your influence over matters on which our stockholders vote. In addition, we may issue substantial quantities of our common stock in order to effect acquisitions which would also dilute your ownership interest. If the issuances are made at prices that reflect a discount from the then current trading price of our common stock, your interest in the book value of our common stock might be diluted.

Item 1B. Unresolved Staff Comments.

Not Applicable.

Item 2. Properties.

Our principal executive offices are located in Chaska, Minnesota. We also have manufacturing, design and equipment cleaning facilities in the United States, Japan, France, Taiwan and Malaysia. Information about our principal facilities is set forth below:

Location	Principal Function	Approximate Square Feet	Leased/Owned
Chaska, Minnesota	Executive Offices, Research & Manufacturing	370,000	Owned[(1)]
Chaska, Minnesota	Warehouse	200,000	Leased
Billerica, Massachusetts	Executive Offices, Research & Manufacturing	175,000	Leased [(2)]
Colorado Springs, Colorado	Manufacturing	82,000	Owned
Gilroy, California	Manufacturing; Cleaning Services	60,000	Owned[(3)]
Decatur, Texas	Manufacturing	359,000	Owned
Montpellier, France	Cleaning Services	53,000	Owned
Yonezawa, Japan	Manufacturing	196,000	Owned
Kulim, Malaysia	Manufacturing	195,000	Owned

(1) In the fourth quarter of 2008, we announced that one of these buildings, comprising 178,000 square feet and housing our corporate headquarters, would be closed during the first half of 2009.
(2) This lease expires March 31, 2014, but is subject to two five-year renewal options.
(3) This facility was closed in 2008 and was in the process of being sold as of December 31, 2008.

We lease approximately 4,200 square feet of manufacturing space in Millipore's facility located at 80 Ashby Road, Bedford, Massachusetts pursuant to an Amended and Restated Membrane Manufacturing and Supply Agreement that expires December 31, 2010. We also lease approximately 13,000 square feet of research and development and manufacturing office space in two buildings located in San Diego, California. Approximately 31,000 square feet of office, research and development and manufacturing space located in Franklin, Massachusetts was assumed pursuant to the Mykrolis acquisition of Extraction Systems, Inc. in 2005.

We also lease an aggregate of approximately 11,000 square feet of office, research and development and manufacturing space in two buildings located in Burlington, Massachusetts which we acquired in connection with our acquisition of a specialty coatings business. These leases are for a term expiring December 31, 2009.

We maintain a worldwide network of sales, service, repair and cleaning centers in the United States, Germany, France, Japan, Taiwan, Singapore, China and Korea. Leases for our facilities expire through March 2014. We currently expect to be able to extend the terms of expiring leases or to find suitable replacement facilities on reasonable terms.

We believe that our facilities are well-maintained and suitable for their respective operations. All of our facilities are generally utilized within a normal range of production volume. However, many of our facilities were utilized below our normal range of production volume in the latter half of 2008 due to rapidly declining business levels. We are currently preparing several facilities in anticipation of expected product transfers related to the closure of one of the Company's facilities in Chaska, Minnesota.

Item 3. Legal Proceedings.

The following discussion provides information regarding certain litigation to which the Company was a party that were pending as of December 31, 2008.

As previously disclosed, on March 3, 2003 the Company's predecessor, Mykrolis Corporation, filed a lawsuit against Pall Corporation in the United States District Court for the District of Massachusetts alleging infringement of two of the Company's U.S. patents by certain fluid separation systems and related assemblies used in photolithography applications manufactured and sold by the defendant. The Company's lawsuit also

sought a preliminary injunction preventing the defendant from the manufacture, use, sale, offer for sale or importation into the U.S. of any infringing product. On April 30, 2004, the Court issued a preliminary injunction against Pall Corporation and ordered Pall to immediately stop making, using, selling, or offering to sell within the U.S., or importing into the U.S., its PhotoKleen EZD-2 Filter Assembly products or "any colorable imitation" of those products. On January 18, 2005, the Court issued an order holding Pall Corporation in contempt of court for the violation of the preliminary injunction and ordering Pall to disgorge all profits earned from the sale of its PhotoKleen EZD-2 Filter Assembly products and colorable imitations thereof from the date the preliminary injunction was issued through January 12, 2005. In addition, Pall was also ordered to reimburse Mykrolis for certain of its attorney's fees associated with the contempt and related proceedings. The Court's order also dissolved the preliminary injunction, effective January 12, 2005, based on certain prior art cited by Pall which it alleged raised questions as to the validity of the patents in suit. On February 17, 2005, the Company filed notice of appeal to the U.S. Circuit Court of Appeals for the Federal Circuit appealing the portion of the Court's order that dissolved the preliminary injunction and Pall filed a notice of appeal to that court with respect to the finding of contempt and the award of attorneys' fees. On June 13, 2007 the Court of Appeals issued an opinion dismissing Pall's appeal for lack of jurisdiction and affirming the District Court's order dissolving the preliminary injunction.

On April 6, 2006 the Company filed a lawsuit against Pall Corporation in the United States District Court for the District of Massachusetts alleging infringement of the Company's newly issued U.S. patent No. 7,021,667 by certain filter assembly products used in photolithography applications that are manufactured and sold by the defendant. The Company's lawsuit also seeks a preliminary injunction preventing the defendant from the manufacture, use, sale, offer for sale or importation into the U.S. of the infringing products. On October 23, 2006 the Company's motion for preliminary injunction was argued before the court. On March 31, 2008 the court issued an order denying the Company's motion for a preliminary injunction.

On August 23, 2006 the Company filed a lawsuit against Pall Corporation in the United States District Court for the District of Massachusetts alleging infringement of the Company's newly issued U.S. patent No. 7,037,424 by certain fluid separation modules and related separation apparatus, including the product known as the EZD-3 Filter Assembly, used in photolithography applications that are manufactured and sold by the defendant. It is believed that the EZD-3 Filter Assembly was introduced into the market by the defendant in response to the action brought by the Company in March of 2003 as described above. On May 5, 2008, the court issued an order consolidating this case with the two cases described in the preceding paragraphs for purposes of discovery; these cases are currently in the discovery stage.

As previously disclosed, on December 16, 2005 Pall Corporation filed suit against the Company in U.S. District Court for the Eastern District of New York alleging patent infringement. Specifically, the suit alleges infringement of two of plaintiff's patents by one of the Company's gas filtration products and by the packaging for certain of the Company's liquid filtration products. Both products and their predecessor products have been on the market for a number of years. The Company intends to vigorously defend this suit and believes that it will ultimately prevail. This case is currently awaiting a hearing before the court for claim construction of the patents in suit.

On May, 4, 2007 Pall Corporation filed a lawsuit against the Company in the U.S. District Court for the Eastern District of New York alleging patent infringement. Specifically, the suit alleges that certain of the Company's point-of-use filtration products infringe a newly issued Pall patent, as well as three older Pall patents. Pall's action, which relates only to the U.S., asserts that "on information and belief" the Company's Impact 2 and Impact Plus point-of-use photoresist filters infringe a patent issued to Pall on March 27, 2007, as well as three older patents. The Company intends to vigorously defend this suit and believes that it will ultimately prevail. This case is currently in the discovery stage.

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

None.

PART II

Item 5. Market for Entegris' Common Stock, Related Stockholder Matters and Issuer Purchases of Equity Securities.

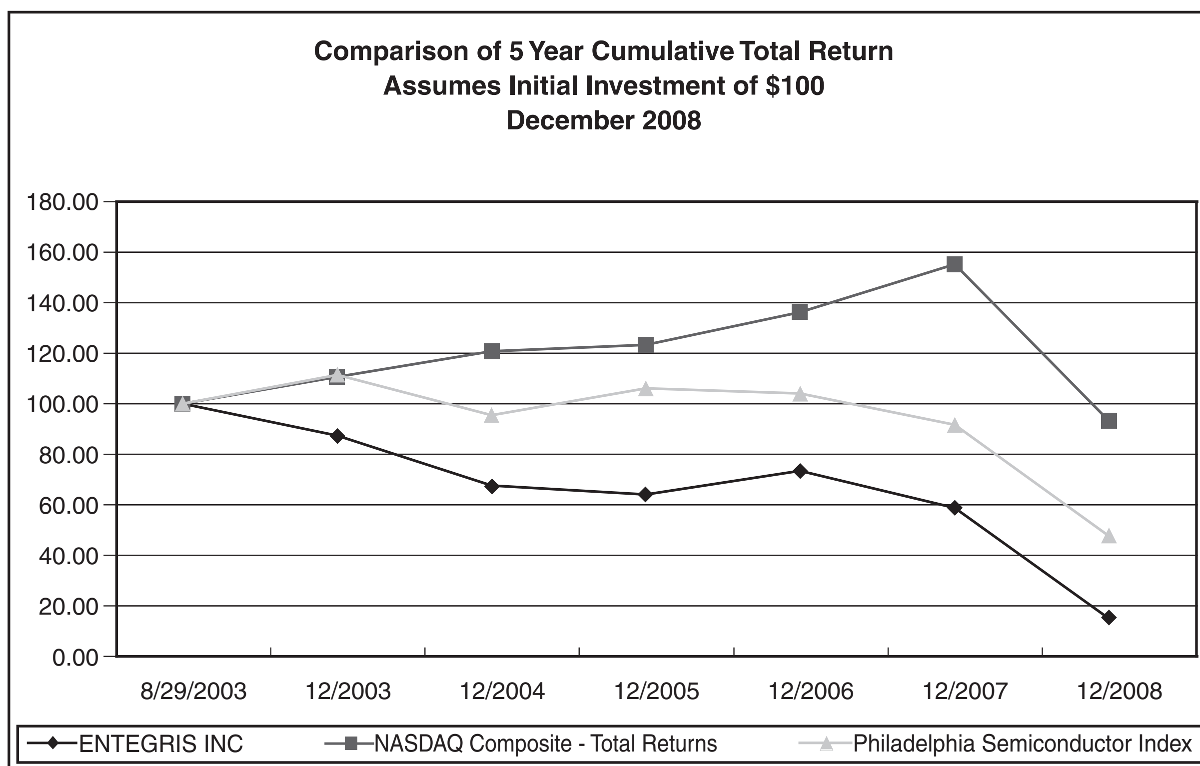
Entegris' Common Stock, $0.01 par value, trades on the NASDAQ National Market System (NMS) under the symbol "ENTG". The following table sets forth the highest and lowest sale prices of the Company shares during fiscal 2008 and 2007. As of February 1, 2009 there were 1,320 shareholders of record.

	Fiscal 2008		Fiscal 2007	
	High	Low	High	Low
First quarter	$8.76	$6.39	$11.98	$10.21
Second quarter	$8.05	$6.56	$12.18	$10.11
Third quarter	$7.10	$4.49	$12.17	$ 8.69
Fourth quarter	$4.94	$1.04	$ 9.49	$ 7.87

The Company has never declared or paid any cash dividends on its capital stock. The Company currently intends to retain all available earnings for use in its business operations and debt service and does not anticipate paying any cash dividends in the foreseeable future. On July 27, 2005 the Entegris Board of Directors declared a dividend of one common stock purchase right for each share of Entegris Common Stock outstanding to shareholders of record on August 8, 2005, payable on August 8, 2005. For a description of the Common Stock Rights Plan see "Other Information" in Item 1 above. Each right generally entitles the holder to purchase one one-hundredth of a share of a series of preferred stock of Entegris at a price of $50.

Comparative Stock Performance

The following graph compares the cumulative total shareholder return on the common stock of Entegris, Inc. from August 29, 2003 through December 31, 2008 with cumulative total return of (1) The NASDAQ Composite Index (NASDAQ), and (2) The Philadelphia Semiconductor Index (SOX), assuming $100 was invested at the close of trading August 29, 2003 in Entegris, Inc. common stock, the NASDAQ Composite Index and the Philadelphia Semiconductor Index and that all dividends are reinvested.



	August 29, 2003	December 31, 2003	December 31, 2004	December 31, 2005	December 31, 2006	December 31, 2007	December 31, 2008
Entegris, Inc.	100	87.30	67.59	63.99	73.50	58.62	14.87
NASDAQ Composite	100	110.66	120.79	123.35	136.17	155.06	93.09
Phila. Semi. Index	100	111.42	95.29	105.93	104.09	91.60	47.63

Issuer Purchases of Equity Securities

None

Item 6. Selected Financial Data

The table that follows presents selected financial data for each of the last five fiscal years and four months ended December 31, 2005 from the Company's consolidated financial statements and should be read in conjunction with the Company's Consolidated Financial Statements and the related Notes and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Form 10-K Report.

On December 13, 2005, the Company's board of directors approved a change in fiscal year end from a 52-week or 53-week fiscal year period ending on the last Saturday of August to December 31, effective as of December 31, 2005.

(In thousands, except per share amounts)	Year ended December 31, 2008	Year ended December 31, 2007	Year ended December 31, 2006	Four months ended December 31, 2005	Year ended August 27, 2005	Year ended August 28, 2004
Operating Results						
Net sales	$ 554,699	$626,238	$672,882	$199,644	$347,345	$329,006
Gross profit	211,515	266,237	305,078	70,207	138,183	149,857
Selling, general and administrative expenses	147,531	163,918	170,702	71,297	105,281	87,771
Engineering, research and development expenses	40,086	39,727	38,074	13,904	18,188	18,066
Amortization of intangible assets	19,585	18,874	17,609	5,956	5,060	3,891
Impairment of goodwill	473,799	—	—	—	—	—
Restructuring charges	10,423	—	—	—	—	—
Operating (loss) profit	(479,909)	43,718	78,693	(20,950)	9,654	40,129
(Loss) income before income taxes and equity in affiliate earnings	(496,413)	56,619	89,556	(18,572)	14,307	41,478
Income tax expense (benefit)	19,201	10,356	26,936	(8,713)	1,154	13,223
(Loss) income from continuing operations	(515,897)	46,356	63,151	(9,789)	12,906	28,242
Net (loss) income	$(517,002)	$ 44,359	$ 63,466	$ (18,324)	$ 9,393	$ 24,770
Earnings Per Share Data						
Diluted (loss) earnings per share—continuing operations	$ (4.58)	$ 0.37	$ 0.46	$ (0.07)	$ 0.16	$ 0.37
Weighted average shares outstanding—diluted	112,653	124,940	138,492	135,437	79,328	76,220
Operating Ratios—% of net sales						
Gross profit	38.1%	42.5%	45.3%	35.2%	39.8%	45.5%
Selling, general and administrative expenses	26.6	26.2	25.4	35.7	30.3	26.7
Engineering, research and development expenses	7.2	6.3	5.7	7.0	5.2	5.5
Amortization of intangible assets	3.5	3.0	2.6	3.0	1.5	1.2
Impairment of goodwill	85.4	—	—	—	—	—
Restructuring charges	1.9	—	—	—	—	—
Operating (loss) profit	(86.5)	7.0	11.7	(10.5)	2.8	12.2
(Loss) income before income taxes and equity in affiliate earnings	(89.5)	9.0	13.3	(9.3)	4.1	12.6
Effective tax rate	(3.9)	18.3	30.1	46.9	8.1	31.9
Net (loss) income	(93.2)	7.1	9.4	(9.2)	2.7	7.5

(In thousands, except per share amounts)	Year ended December 31, 2008	Year ended December 31, 2007	Year ended December 31, 2006	Four months ended December 31, 2005	Year ended August 27, 2005	Year ended August 28, 2004
Cash Flow Statement Data						
Depreciation and amortization	$ 46,343	$ 43,776	$ 42,905	$ 13,754	$ 23,599	$ 23,575
Capital expenditures	26,987	26,919	30,860	10,311	19,472	19,633
Net cash provided by operating activities	66,260	132,017	96,076	22,598	52,323	52,658
Net cash (used in) provided by investing activities	(199,921)	50,800	(17,370)	(13,116)	58,807	(86,880)
Net cash provided by (used in) financing activities	82,681	(183,061)	(80,037)	(15,432)	3,066	1,835
Balance Sheet and Other Data						
Current assets	$ 313,128	$ 382,621	$ 556,321	$ 516,364	$ 546,502	$276,482
Current liabilities	79,356	125,749	92,699	111,017	124,856	63,895
Working capital	233,772	256,872	463,622	405,347	421,646	212,587
Current ratio	3.95	3.04	6.00	4.65	4.38	4.33
Long-term debt	150,516	20,373	2,995	3,383	21,800	18,898
Shareholders' equity	336,170	852,309	1,015,980	1,012,819	1,023,414	372,185
Total assets	597,824	1,035,241	1,157,618	1,142,790	1,185,620	467,046
Return on average shareholders' equity—%	(87.0)	4.7	6.3	(1.8)	1.3	7.0
Shares outstanding at end of period	113,102	115,356	132,771	136,044	135,299	73,380

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

You should read the following discussion and analysis of the Company's consolidated financial condition and results of operations with the consolidated financial statements and the accompanying notes to the consolidated financial statements included elsewhere in this document. *This discussion contains forward-looking statements that involve numerous risks and uncertainties, including, but not limited to, those described in the* "FACTORS AND UNCERTAINTIES THAT MAY AFFECT FUTURE RESULTS" *section of this Item 7. The Company's actual results may differ materially from those contained in any forward-looking statements.*

Overview

This overview is not a complete discussion of the Company's financial condition, changes in financial condition and results of operations; it is intended merely to facilitate an understanding of the most salient aspects of its financial condition and operating performance and to provide a context for the discussion that follows. The detailed discussion and analysis that follows must be read in its entirety in order to fully understand the Company's financial condition and results of operations.

Entegris, Inc. is a leading provider of products and services that purify, protect and transport the critical materials used in key technology-driven industries. Entegris derives most of its revenue from the sale of products and services to the semiconductor and data storage industries. The Company's customers consist primarily of semiconductor manufacturers, semiconductor equipment and materials suppliers, and hard disk manufacturers, which are served through direct sales efforts, as well as sales and distribution relationships, in the United States, Asia, Europe and the Middle East.

The Company offers a diverse product portfolio which includes more than 15,000 standard and customized products that we believe provide the most comprehensive offering of materials integrity management products and services to the microelectronics industry. Certain of these products are unit-driven and consumable products that rely on the level of semiconductor manufacturing activity to drive growth, while others rely on expansion of manufacturing capacity to drive growth. The Company's unit-driven and consumable product class includes wafer shippers, disk shipping containers and test assembly and packaging products, membrane-based liquid filters and housings, metal-based gas filters and resin-based gas purifiers, as well as PVA roller brushes for use in post-CMP cleaning applications. The Company's capital expense- driven products include its process carriers that protect the integrity of in-process wafers, components, systems and subsystems that use electro-mechanical, pressure differential and related technologies to permit semiconductor and other electronics manufacturers to monitor and control the flow and condition of process liquids used in these manufacturing processes. With its August 2008 acquisition of Poco Graphite, Inc. (POCO) described below, the Company added process-critical, graphite-based consumables and finished products used in a variety of markets to its portfolio of products.

Key operating factors Key factors, which management believes have the largest impact on the overall results of operations of Entegris, Inc., include:

- ***Level of sales*** Since a large portion of the Company's product costs (except for raw materials, purchased components and direct labor) are largely fixed in the short to medium term, an increase or decrease in sales affects gross profits and overall profitability significantly. Also, increases or decreases in sales and operating profitability affect certain costs such as incentive compensation and commissions, which are highly variable in nature. The Company's sales are subject to effects of industry cyclicality, technological change and substantial competition, including pricing pressures.
- ***Variable margin on sales*** The Company's variable margin on sales is determined by selling prices and the costs of manufacturing and raw materials. This is also affected by a number of factors, which include the Company's sales mix, purchase prices of raw material (especially resin and purchased components), competition, both domestic and international, direct labor costs, and the efficiency of the Company's production operations, among others.

- ***Fixed cost structure*** Increases or decreases in sales have a large impact on profitability. There are a number of large fixed or semi-fixed cost components, which include salaries, indirect labor and benefits, facility costs, lease expense, and depreciation and amortization. It is not possible to vary these costs easily in the short term as volumes fluctuate. Thus changes in sales volumes can affect the usage and productivity of these cost components and can have a large effect on the Company's results of operations.

Overall Summary of Financial Results for the Year Ended December 31, 2008

For the year ended December 31, 2008 (2008), net sales were $554.7 million, down $71.5 million, or 11.4%, from net sales of $626.2 million reported for the year ended December 31, 2007 (2007). The sales decline was mitigated by the inclusion of sales of $23.3 million from POCO, which was acquired in August 2008, sales of $5.9 million related to the full-year inclusion of sales from the specialty coatings business acquired in August 2007, and a favorable foreign currency translation effect of $22.8 million. Excluding those mitigating factors, sales fell 19.7% in 2008 when compared to 2007.

Mainly reflecting the lower factory utilization associated with the year-over-year sales decrease and the $13.5 million incremental charge associated with the fair market value write-up of inventory acquired in the acquisition of POCO, the Company reported considerably lower gross profits and a reduced gross margin. The Company's gross margin in 2008 was 38.1% versus 42.5% in 2007. The Company's selling, general and administrative (SG&A) expenses decreased $16.4 million in 2008, the key element of the year-over-year reduction being the absence of incentive and profit sharing compensation.

The Company reported a loss from continuing operations of $515.9 million for 2008 compared to income of $46.4 million in 2007. The loss was substantially attributable to goodwill impairment charges of $473.8 million ($454.6 million, net of tax). The goodwill impairment charges, described in Note 2 to the Company's consolidated financial statements, have no impact on the Company's liquidity, cash flows from operating activities, or debt covenants.

As noted above, the Company acquired POCO on August 11, 2008 for cash consideration of $162.9 million. Based in Decatur, Texas, POCO is a leading provider of process-critical, graphite-based consumables and finished products used in a variety of markets. The acquisition was funded with a combination of existing cash balances and funds available from the Company's domestic credit facility.

During 2008, the Company's operating activities provided cash flow of $66.3 million. Cash and cash equivalents were $115.0 million at December 31, 2008 compared with $160.7 million at December 31, 2007. The decrease in cash mainly reflects the acquisition of POCO in the third quarter, partially offset by the cash provided by operating activities and an increase in long-term debt.

Critical Accounting Policies Management's discussion and analysis of financial condition and results of operations are based upon the Company's consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires the Company to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. At each balance sheet date, management evaluates its estimates, including, but not limited to, those related to accounts receivable, warranty and sales return obligations, inventories, long-lived assets, income taxes, business combinations and shared-based compensation. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. The critical accounting policies affected most significantly by estimates, assumptions and judgments used in the preparation of the Company's consolidated financial statements are discussed below.

Net Sales The Company's net sales consist of revenue from sales of products net of trade discounts and allowances. The Company recognizes revenue upon shipment, primarily FOB shipping point, when evidence of an arrangement exists, contractual obligations have been satisfied, title and risk of loss have been transferred to the customer and collection of the resulting receivable is reasonably assured based upon historical collection results and regular credit evaluations. In most transactions, the Company has no obligations to its customers after the date products are shipped other than pursuant to warranty obligations. In the event that significant post-shipment obligations or uncertainties exist such as customer acceptance, revenue recognition is deferred as appropriate until such obligations are fulfilled or the uncertainties are resolved.

Accounts Receivable-Related Valuation Accounts The Company maintains allowances for doubtful accounts and for sales returns and allowances. Significant management judgments and estimates must be made and used in connection with establishing these valuation accounts. Material differences could result in the amount and timing of the Company's results of operations for any period if management made different judgments or utilized different estimates. In addition, actual results could be different from the Company's current estimates, possibly resulting in increased future charges to earnings.

The Company provides an allowance for doubtful accounts for all individual receivables judged to be unlikely for collection. For all other accounts receivable, the Company records an allowance for doubtful accounts based on a combination of factors. Specifically, management considers the age of receivable balances and historical bad debts write-off experience when determining its allowance for doubtful accounts. The Company's allowance for doubtful accounts was $1.3 million and $0.5 million at December 31, 2008 and 2007, respectively.

An allowance for sales returns and allowances is established based on historical and current trends in product returns. At December 31, 2008 and 2007, the Company's reserve for sales returns and allowances was $1.9 million and $2.0 million, respectively.

Inventory Valuation The Company uses certain estimates and judgments to properly value inventory. In general, the Company's inventories are recorded at the lower of cost or market value. Each quarter, the Company evaluates its ending inventories for obsolescence and excess quantities. This evaluation includes analyses of inventory levels, historical write-off trends, expected product lives, and sales levels by product. Inventories that are considered obsolete are written off or a full allowance is recorded. In addition, allowances are established for inventory quantities in excess of forecasted demand. Inventory allowances were $8.3 million and $8.9 million at December 31, 2008 and 2007, respectively.

The Company's inventories include materials and products subject to technological obsolescence, which are sold in highly competitive industries. If future demand or market conditions are less favorable than current conditions, additional inventory write-downs or allowances may be required and would be reflected in cost of sales in the period the revision is made.

Impairment of Goodwill and Long-Lived Assets The Company assesses the impairment of goodwill at least annually, or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. The Company's annual impairment test is performed as of August 31. Factors considered important which could trigger an impairment review, and potentially an impairment charge, include the following:

- significant underperformance relative to historical or projected future operating results;
- significant changes in the manner of use of the acquired assets or the Company's overall business strategy;
- significant negative industry or economic trends; and
- significant decline in the Company's stock price for a sustained period, resulting in the Company's market capitalization being below its net book value.

In accordance with Statement of Financial Accounting Standards ("SFAS") No. 142, *Goodwill and Other Intangible Assets*, the Company tested for impairment of its goodwill in connection with its annual impairment test of goodwill as of August 31, 2008, and due to events and changes in circumstances through the end of 2008, the Company had an additional triggering event that indicated impairments had occurred.

Based on the results of the Company's assessment of goodwill for impairment, it was determined that the carrying value of the Company's net assets exceeded its estimated fair value. Therefore, the Company performed a second step of the impairment test to determine the implied fair value its goodwill. The Company performed the assessment of impairment of its goodwill twice during the year, once during the third quarter, when the Company wrote off $379.8 million of goodwill, and the second time at the end of the year, when the Company wrote off the remaining goodwill of $94.0 million. (See Note 2 to the consolidated financial statements.)

The Company routinely considers whether indicators of impairment of its property and equipment assets, particularly its molding equipment, and its intangible assets, are present. If such indicators are present, it is determined whether the sum of the estimated undiscounted cash flows attributable to the asset group in question is less than their carrying value. If less, an impairment loss is recognized based on the excess of the carrying amount of the asset group over its respective fair value. Fair value is determined by discounting estimated future cash flows, appraisals or other methods deemed appropriate. If the asset groups determined to be impaired are to be held and used, the Company recognizes an impairment charge to the extent the present value of anticipated net cash flows attributable to the asset group is less than the assets' carrying value. The fair value of the assets then becomes the assets' new carrying value, which is depreciated over the remaining estimated useful life of the assets.

In connection with the triggering events discussed above, during the third and fourth quarters of fiscal year 2008 the Company reviewed its long-lived assets and determined that none of its long-lived assets were impaired for its asset groups. The determination was based on reviewing estimated undiscounted cash flows for the Company's asset groups, which were greater than their carrying values. As required under U.S. generally accepted accounting principles, the SFAS No. 144 impairment analysis occurred before the SFAS No. 142 goodwill impairment assessment.

The evaluation of the recoverability of long-lived assets requires the Company to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to, the identification of the asset group at the lowest level of independent cash flows and the primary asset of the group; and long-range forecasts of revenue, reflecting management's assessment of general economic and industry conditions, operating income, depreciation and amortization and working capital requirements.

Due to the inherent uncertainty involved in making these estimates, particularly in the current economic environment and plan for a recovery, actual results could differ from those estimates. In addition, changes in the underlying assumptions would have a significant impact on the conclusion that an asset group's carrying value is recoverable, or the determination of any impairment charge if it was determined that the asset values were indeed impaired.

Due to the decline in the Company's market capitalization and the uncertain economic environment within the semiconductor industry, the Company will continue to monitor circumstances and events in future periods to determine whether additional asset impairment testing is warranted. It is not unlikely that in the future the Company may no longer be able to conclude that there is no impairment of its long-lived assets, nor can the Company provide assurance that material impairment charges of long-lived assets will not occur in future periods.

Income Taxes In the preparation of the Company's consolidated financial statements, management is required to estimate income taxes in each of the jurisdictions in which the Company operates. This process involves

estimating actual current tax expense together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included in the Company's consolidated balance sheet.

The Company has significant amounts of deferred tax assets. Management reviews its deferred tax assets for recoverability on a quarterly basis and assesses the need for valuation allowances. Management considered the positive and negative evidence for the potential utilization of its deferred tax assets based upon an application of the principles of SFAS No. 109, *Accounting for Income Taxes,* and related accounting pronouncements. Management concluded that it is not more likely than not that the Company will realize certain deferred tax assets and provided an allowance for the portion of deferred tax assets management concluded will not be utilized. As a result, the Company recorded a deferred tax asset valuation allowance of $42.7 million, which is included in income tax expense for 2008.

In addition, the calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of complex tax laws. Resolution of these uncertainties in a manner inconsistent with management's expectations could have a material impact on the Company's financial condition and operating results.

Warranty Claims Accrual The Company records a liability for estimated warranty claims. The amount of the accrual is based on historical claims data by product group and other factors. Estimated claims could be materially different from actual results for a variety of reasons, including a change in product failure rates and service delivery costs incurred in correcting a product failure, manufacturing changes that could impact product quality, or as yet unrecognized defects in products sold. At December 31, 2008 and 2007, the Company's accrual for estimated future warranty costs was $1.1 million and $1.3 million, respectively.

Business Acquisitions The Company accounts for acquired businesses using the purchase method of accounting, which requires that the assets acquired and liabilities assumed be recorded at the date of acquisition at their respective fair values. The judgments made in determining the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can materially impact net income. Accordingly, for significant acquisitions, the Company typically obtains assistance from independent valuation specialists.

There are several methods that can be used to determine the fair value of assets acquired and liabilities assumed. For intangible assets, the Company normally utilizes the "income method." This method starts with a forecast of all of the expected future net cash flows. These cash flows are then adjusted to present value by applying an appropriate discount rate that reflects the risk factors associated with the cash flow streams. Some of the more significant estimates and assumptions inherent in the income method or other methods include the projected amount and timing of future cash flows and the discount rate reflecting the risks inherent in the future cash flows.

Determining the useful life of an intangible asset also requires judgment. For example, different types of intangible assets will have different useful lives and certain assets may even be considered to have indefinite useful lives. All of these judgments and estimates can significantly impact net income.

Share-Based Compensation Statement of Financial Accounting Standards No. 123 (revised 2004*), Share-Based Payment*, (SFAS 123(R)) requires the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors based on estimated fair values. Under SFAS 123(R), the Company must estimate the value of employee stock option and restricted stock awards on the date of grant.

The fair value of restricted stock and restricted stock unit awards is valued based on the Company's stock price on the date of grant. The fair value of stock option awards is estimated on the date of grant using an option-pricing model affected by the Company's stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected stock price

volatility over the term of the awards, risk-free interest rate and dividend yield assumptions, and actual and projected employee stock option exercise behaviors and forfeitures. Because share-based compensation expense recognized in the consolidated statement of operations is based on awards ultimately expected to vest, it has been recorded net of estimated forfeitures. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Forfeitures are estimated based on historical experience.

If the above factors change, and the Company uses different assumptions in the application of SFAS 123(R) in future periods, the share-based compensation expense recorded under SFAS 123(R) may differ significantly from what was recorded in the current period.

Certain restricted stock and restricted stock unit awards involve stock to be issued upon the achievement of performance conditions (performance shares) under the Company's stock incentive plans. Such performance shares become available subject to time-based vesting conditions if, and to the extent that, financial performance criteria for the applicable fiscal year or multi-year period are achieved. Accordingly, the number of performance shares earned will vary based on the level of achievement of financial performance objectives for the applicable period. Until such time that the Company's performance can ultimately be determined, each quarter the Company estimates the number of performance shares more likely than not to be earned based on an evaluation of the probability of achieving the performance objectives. Such estimates are revised, if necessary, in subsequent periods when the underlying factors change the Company's evaluation of the probability of achieving the performance objectives. Accordingly, share-based compensation expense associated with performance shares recorded under SFAS 123(R) may differ significantly from the amount recorded in the current period.

Results of Operations

Year ended December 31, 2008 compared to year ended December 31, 2007

The following table sets forth the results of operations and the relationship between various components of operations, stated as a percent of net sales, for the years ended December 31, 2008 and 2007. The Company's historical financial data was derived from its consolidated financial statements and related notes included elsewhere in this annual report.

(Dollars in thousands)	2008		2007	
		% of net sales		% of net sales
Net sales	$ 554,699	100.0%	$626,238	100.0%
Cost of sales	343,184	61.9	360,001	57.5
Gross profit	211,515	38.1	266,237	42.5
Selling, general and administrative expenses	147,531	26.6	163,918	26.2
Engineering, research and development expenses	40,086	7.2	39,727	6.3
Amortization of intangible assets	19,585	3.5	18,874	3.0
Impairment of goodwill	473,799	85.4	—	—
Restructuring charges	10,423	1.9	—	—
Operating (loss) profit	(479,909)	(86.5)	43,718	7.0
Interest expense (income), net	1,018	0.2	(5,245)	(0.8)
Other expense (income), net	15,486	2.8	(7,656)	(1.2)
(Loss) income before income taxes and equity in earnings of affiliates	(496,413)	(89.5)	56,619	9.0
Income tax expense	19,201	3.5	10,356	1.7
Equity in net loss (earnings) of affiliates	283	0.1	(93)	(0.0)
Net (loss) income from continuing operations	$(515,897)	(93.0)	$ 46,356	7.4

Net sales For the year ended December 31, 2008 (2008), net sales were $554.7 million, down $71.5 million, or 11.4%, from sales for the year ended December 31, 2007 (2007). The sales decline was mitigated by the inclusion of sales of $23.3 million from POCO, which was acquired in August 2008, sales of $5.9 million related to the full-year inclusion of sales from the specialty coatings business acquired in August 2007, and a favorable foreign currency translation effect of $22.8 million. Excluding those mitigating factors, sales fell 19.7% in 2008 compared to 2007. The currency effect reflected the strengthening of most international currencies versus the U.S. dollar, most notably the Japanese yen and the Euro. On a geographic basis, total sales to North America were 29%, Asia Pacific 34%, Europe 16% and Japan 21% in 2008.

Demand drivers for the Company's business primarily consist of semiconductor fab utilization and production (unit-driven) as well as capital spending for new or upgraded semiconductor fabrication facilities (capital-driven). The Company analyzes sales of its products by these two key drivers. Both unit-driven and capital-driven sales in 2008 decreased as compared with 2007. Sales of unit-driven products represented 65% of sales and sales of capital-driven products represented 35% of total sales in 2008. This compares to a unit-driven to capital-driven ratio of 60:40 for 2007, indicating a decrease in demand of capital-driven sales within the industry over the past twelve months.

Sales of unit-driven products fell 5% in 2008. Excluding sales of POCO, sales of unit-driven products fell 11% in 2008. Unit-driven products have average lives of less than 18 months or need to be replaced based on usage levels. These products include liquid filters used in the photolithography, CMP and wet etch and clean processes, and in wafer shippers used to ship raw wafers, particularly at wafer sizes of 150mm and below, as well as in chip trays and data storage components used to ship 65mm and 95mm disk drives. Sales of shippers declined 13%, partially offset by the increase in sales of 300mm wafer shippers of 181%. In addition, sales of filtration products declined by 11%.

Year-over-year sales of capital-driven products decreased 22% in 2008. Capital-driven products include wafer process carriers, gas microcontamination control systems used in the deployment of advanced photolithography processes, fluid handling systems, including dispense pumps used in the photolithography process, and integrated liquid flow controllers used in various processes around the fab. Sales of control systems declined by 20% due to lower sales of dispense pumps, which fell by 48%. Sales of wafer transport products fell by 31%, such as 300mm FOUP products which declined by 39%. Sales of filtration products also fell by 16% primarily due to decreased sales of gas filtration products.

Gross profit Gross profit for 2008 decreased by $54.7 million, to $211.5 million, a decrease of 20.6% from $266.2 million for 2007. The gross margin rate for 2008 was 38.1% versus 42.5% for 2007.

The gross profit decline was primarily due to lower utilization of the Company's production facilities compared to the prior period, as well as the fair market value write-up of inventory discussed below. Production volumes were considerably lower in 2008. Despite significant increases in the price of oil and other commodities during much of 2008, price increases for the Company's raw materials and purchased components were relatively modest on a year-over-year basis. Charges to cost of sales associated with obsolescence and excess inventory quantities were $2.2 million lower in 2008 compared to 2007.

Gross margin in 2008 included a $13.5 million incremental charge associated with the fair market value write-up of inventory acquired in the acquisition of POCO. This incremental charge had a negative 2.4% impact on the overall gross margin for 2008. The inventory write-up was recorded as part of the purchase price allocation and is charged to cost of sales over inventory turns of the acquired inventory. The Company expects to record additional incremental charges of $4.1 million associated with the fair market value write-up of POCO inventory, most of which will be recorded in the first quarter of 2009.

Selling, general and administrative expenses Selling, general and administrative (SG&A) expenses of $147.5 million for 2008 decreased $16.4 million, or 10%, compared to $163.9 million in 2007. SG&A expenses, as a percent of net sales, increased to 26.6% from 26.2% a year earlier.

The year-over-year decrease in SG&A costs includes reductions in commissions and incentive compensation totaling $8.2 million; share-based compensation expense and pension expense of $6.2 million, and royalty expense of $3.5 million. In addition, costs of $2.6 million were incurred by the Company in 2007 in connection with the integration and realignment activities associated with the Mykrolis merger. Partially offsetting these decreases was an increase of $4.8 million in SG&A costs reflecting the effect of foreign currency translation.

Engineering, research and development expenses Engineering, research and development (ER&D) expenses rose by $0.4 million, or 0.9%, to $40.1 million in 2008 compared to $39.7 million in 2007. ER&D expenses as a percent of net sales were 7.2% compared to 6.3% a year ago.

Amortization of intangible assets Amortization of intangible assets was $19.6 million in 2008 compared to $18.9 million for 2007. The increase mainly reflects the additional amortization expenses related to the intangibles of POCO that were acquired in August 2008 and the full-year amortization of the intangibles of the specialty coatings business acquired in August 2007.

Impairment of Goodwill In accordance with Statement of Financial Accounting Standards ("SFAS") No. 142, *Goodwill and Other Intangible Assets*, the Company performed the assessment of impairment of its goodwill twice during the year, once in connection with its annual impairment test of goodwill as of August 31, 2008 and due to events and changes in circumstances through the end of the fourth quarter of fiscal 2008, the Company had a second trigger event that indicated impairments had occurred. In addition, the Company tested for impairment its long-lived assets (principally property, plant and equipment and intangibles) in accordance with SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets.*

The factors deemed by management to have collectively constituted impairment triggering events included a significant decrease in the Company's market capitalization throughout 2008, to a level significantly below the recorded value of its consolidated net assets, and a significant decline in the current and forecasted business level. As a result of the impairment assessments, the Company recorded impairment charges of goodwill of $473.8 million in 2008. As of December 31, 2008, the Company had no remaining goodwill.

Restructuring charges In 2008, the Company initiated a global business restructuring of its sales and marketing function, manufacturing operations, and realignment of the global supply chain and other ancillary operational functions. Related to these cost reduction initiatives, the Company announced on November 4, 2008 that it will close the larger of its two manufacturing facilities in Chaska, Minnesota and will transfer production to its other existing facilities. Associated with these changes, the Company recorded $10.4 million in restructuring charges in 2008, consisting mainly of employee severance costs.

Interest expense (income), net Net interest expense was $1.0 million in 2008 compared to interest income of $5.2 million in 2007. The decrease reflects lower average invested balances compared to a year ago and an increase in the Company's short-term borrowings and long-term debt in 2008.

Other expense (income) Other expense was $15.5 million in 2008 compared to other income of $7.7 million in 2007. Other expense in 2008 includes impairment losses on equity investments of $11.1 million and foreign currency transaction losses of $4.4 million. Other income in 2007 includes foreign currency transaction gains of $1.2 million and a pre-tax gain of $6.1 million on the sale of the Company's interest in a privately held equity investment accounted for using the cost method. Proceeds from the sale totaled $6.6 million.

Income tax expense The Company recorded income tax expense of $19.2 million in 2008, compared to income tax expense of $10.4 million in 2007. The effective tax rate was (3.9)% in 2008 compared with a 18.3% rate in 2007.

The effective tax rate for 2008 is principally attributable to two factors. The Company recorded a $473.8 million goodwill impairment charge in 2008. Most of the Company's goodwill impairment charge is not deductible for income tax purposes. Accordingly, the Company recognized a tax benefit of only $19.2 million in connection with the impairment charge.

Also during 2008, the Company recorded a $42.7 million valuation allowance against its deferred tax assets consisting primarily of net operating loss carryovers, general business carryovers and foreign tax credit carryforwards, $0.6 million of which related to discontinued operations. The Company carried no valuation allowance against its deferred tax assets at December 31, 2007. As a result of the recent general economic and industry downturn, and its impact on the Company's future outlook, management has reviewed its deferred tax assets and concluded that the uncertainties related to the realization of its assets, have become unfavorable. Management considered the positive and negative evidence for the potential utilization of its deferred tax assets based upon an application of the principles of SFAS No.109 and related accounting pronouncements. Management concluded that it is not more likely than not that the Company will realize certain deferred tax assets and thus provided an allowance for the portion of deferred tax assets management concluded will not be utilized.

The Company's 2007 tax rate was lower than the U.S. statutory rate for a number of reasons. In the fourth quarter of 2007, the Company's Japanese subsidiary declared a dividend of 6.8 billon yen (approximately U.S. $60 million) and also loaned 4.6 billion yen (approximately U.S. $40 million) to the Company. The resulting recharacterization of $100 million of the Japanese subsidiary's accumulated undistributed earnings resulted in a fourth quarter tax benefit of $9.4 million, net of state income tax expense. The Company also benefited from the tax holiday in Malaysia in 2007 in the amount of $2.1 million.

Discontinued operations

The Company's businesses classified as discontinued operations recorded a net loss of $1.1 million in 2008. The Company completed the sale of its cleaning equipment business, classified as a discontinued operation, for proceeds of $0.7 million in April 2008.

The Company's discontinued operations recorded a net loss of $2.0 million for 2007. These results included an operating loss of $1.4 million, a pre-tax impairment charge of $2.6 million recorded in connection with the write-down of long-lived assets to fair value less cost to sell, and a tax benefit of $0.7 million related to a reduction in the Company's deferred tax asset valuation allowance, resulting from the utilization of a capital loss carryforward to offset a portion of the capital gain on the sale of an equity investment.

Net (loss) income The Company recorded a net loss of $517.0 million, or $4.59 per share, in 2008, compared to net income of $44.4 million, or $0.36 per diluted share, in 2007. The Company's loss from continuing operations for 2008 was $515.9 million, or $4.58 per share, compared to income from continuing operations of $46.4 million, or $0.37 per diluted share, in the prior year.

Year ended December 31, 2007 compared to year ended December 31, 2006

The following table sets forth the results of operations and the relationship between various components of operations, stated as a percent of net sales, for the years ended December 31, 2007 and 2006. The Company's historical financial data was derived from its consolidated financial statements and related notes included elsewhere in this annual report.

(Dollars in thousands)	2007		2006	
		% of net sales		% of net sales
Net sales	$626,238	100.0%	$672,882	100.0%
Cost of sales	360,001	57.5	367,804	54.7
Gross profit	266,237	42.5	305,078	45.3
Selling, general and administrative expenses	163,918	26.2	170,702	25.4
Engineering, research and development expenses	39,727	6.3	38,074	5.7
Amortization of intangible assets	18,874	3.0	17,609	2.6
Operating profit	43,718	7.0	78,693	11.7
Interest income, net	(5,245)	(0.8)	(9,205)	(1.4)
Other income, net	(7,656)	(1.2)	(1,658)	(0.2)
Income before income taxes and equity in earnings of affiliates	56,619	9.0	89,556	13.3
Income tax expense	10,356	1.7	26,936	4.0
Equity in net earnings of affiliates	(93)	(0.0)	(531)	(0.1)
Net income from continuing operations	$ 46,356	7.4	$ 63,151	9.4

Net sales For the year ended December 31, 2007 (2007), net sales were $626.2 million, down $46.6 million, or 6.9%, from sales for the year ended December 31, 2006 (2006). Net sales for 2007 included favorable foreign currency translation effects of $8.9 million. This reflected the strengthening of certain international currencies versus the U.S. dollar, most notably the Euro. On a geographic basis, total sales to North America were 26%, Asia Pacific 36%, Europe 15% and Japan 23% in 2007. Sales from products of the high-purity semiconductor coatings business acquired in the third quarter totaled $6.2 million in 2007.

Demand drivers for the Company's business primarily consist of semiconductor fab utilization and production (unit-driven) as well as capital spending for new or upgraded semiconductor fabrication facilities (capital-driven). The Company analyzes sales of its products by these two key drivers. Both unit-driven and capital-driven sales in 2007 decreased as compared with 2006. Sales of unit-driven products represented 60% of sales and sales of capital-driven products represented 40% of total sales in 2007. This compares to a unit-driven to capital-driven ratio of 59:41 for 2006.

Sales of unit-driven products fell 6% in 2007 as semiconductor fab utilization rates were relatively flat. Unit-driven products have average lives of less than 18 months or need to be replaced based on usage levels. These products include liquid filters used in the photolithography, CMP and wet etch and clean processes, and in wafer shippers used to ship raw wafers, particularly at wafer sizes of 150mm and below, as well as in chip trays and data storage components used to ship 65mm and 95mm disk drives. Sales of wafer shippers declined 11%, while sales of disk shippers fell 17%, primarily due to lower sales of 65mm shippers.

Year-over-year sales of capital-driven products decreased 11% in 2007. Capital-driven products include wafer process carriers, gas microcontamination control systems used in the deployment of advanced photolithography processes, fluid handling systems, including dispense pumps used in the photolithography process, and integrated liquid flow controllers used in various processes around the fab. Sales of liquid systems also declined in the latter half of 2007, reflecting the general slowing in the industry. Wafer transport products, such as 300mm FOUP products, also fell, particularly at some North American customers. Sales of gas microcontamination control products fell 5% after reaching peak levels in 2006.

Gross profit Gross profit for 2007 decreased by $38.8 million, to $266.2 million, a decrease of 12.7% from $305.1 million for 2006. The gross margin rate for 2007 was 42.5% versus 45.3% for 2006.

The gross profit decline was primarily due to the lower utilization of the Company's production facilities compared to the prior period. Production volumes were considerably lower in 2007 as the Company sold inventory on hand to satisfy customer demand, particularly in the first half of the year. Prices for raw materials were relatively stable on a year-over-year basis.

Gross margin for 2007 also was affected by $2.2 million in transition costs such as travel, sampling and customer qualification costs related to the transfer of four product lines from U.S. facilities to the Company's facility in Kulim, Malaysia. Costs of $2.9 million associated with the consolidation or closure of manufacturing facilities in the U.S. and Singapore also reduced gross profit in 2007.

Gross margin in 2007 included a $0.8 million cost of sales charge associated with the fair market value write-up of inventory acquired in the purchase of the assets of the high-purity semiconductor coatings business acquired in the third quarter of 2007. The inventory write-up was recorded as part of the purchase price allocation and is charged to cost of sales over inventory turns of the acquired inventory.

Gross profit in 2006 was reduced by costs of $2.8 million incurred in connection with the consolidation of manufacturing facilities in the U.S., Germany and Japan. Offsetting these charges to 2006 gross profit was a gain of $0.7 million on the sale of a facility recognized during the second quarter of 2006. Gross profit in the third and fourth quarters of 2006 was lower than the strong levels achieved earlier in the year due to manufacturing inefficiencies experienced at a North American plant in the third quarter and expenses incurred in the fourth quarter in connection with a comprehensive worldwide review of the Company's manufacturing operations to identify and resolve manufacturing inefficiencies.

Selling, general and administrative expenses Selling, general and administrative (SG&A) expenses of $163.9 million for 2007 decreased $6.8 million, or 4.0%, compared to $170.7 million in 2006. SG&A expenses, as a percent of net sales, increased to 26.2% from 25.4% a year earlier.

The year-over-year decrease in SG&A costs reflects the lower SG&A expenses incurred by the Company in connection with the integration activities associated with the Mykrolis merger and other realignment activities, as well as the benefit of the consolidation of various sales, marketing and other corporate functions during 2006. Costs of $2.6 million were incurred by the Company in 2007 in connection with the integration and realignment activities associated with the Mykrolis merger, compared to $12.1 million in 2006. The costs included in this category generally relate to expenses incurred to integrate Mykrolis' operations and systems into the Company's pre-existing operations and systems. These costs include, but are not limited to, the integration of information systems, employee benefits and compensation, accounting/finance, tax, treasury, risk management, compliance, administrative services, sales and marketing and other functions and include severance and retention costs. The year-over-year decrease in SG&A expenses also includes a decline in incremental share-based compensation expense of $3.0 million, offset by an increase in professional fees of $2.2 million.

Engineering, research and development expenses Engineering, research and development (ER&D) expenses rose by $1.7 million, or 4.3%, to $39.7 million in 2007 compared to $38.1 million in 2006. ER&D expenses as a percent of net sales were 6.3% compared to 5.7% in 2006. The increase reflected higher product sampling costs as the Company continued to focus on the support of current product lines and the development of new products and manufacturing technologies.

Amortization of intangible assets Amortization of intangible assets was $18.9 million in 2007 compared to $17.6 million in 2006. The increase mainly reflects the additional amortization expenses related to the intangibles of the specialty coatings business acquired in August 2007.

Interest income, net Net interest income was $5.2 million in 2007 compared to $9.2 million in 2006. The decrease reflects lower average invested balances compared to the prior year, primarily related to the Company's use of cash to finance the repurchase of its common shares during the second quarter of 2007.

Other income Other income in 2007 includes a pre-tax gain of $6.1 million on the sale of the Company's interest in a privately held equity investment accounted for using the cost method. Proceeds from the sale totaled $6.6 million.

Income tax expense The Company recorded income tax expense of $10.4 million in 2007, compared to income tax expense of $26.9 million in 2006. The effective tax rate was 18.3% in 2007 compared with a 30.1% rate a year earlier.

The Company's 2007 tax rate was lower than statutory rates for a number of reasons. In the fourth quarter of 2007, the Company's Japanese subsidiary declared a dividend of 6.8 billon yen (approximately U.S. $60 million) and also loaned 4.6 billion yen (approximately U.S. $40 million) to the Company. The resulting recharacterization of $100 million of the Japanese subsidiary's accumulated undistributed earnings resulted in a fourth quarter tax benefit of $9.4 million, net of state income tax expense.

The Company also benefited from a tax holiday in Malaysia whereby, as a result of employment commitments, research and development expenditures and capital investments made by the Company, income from certain manufacturing activities in Malaysia was exempt from tax with tax benefits in 2007 in the amount of $2.1 million. In 2006, the Company's benefit from the tax holiday was $2.8 million. The 2007 effective tax rate was also lower due to a corporate income tax refund of $0.8 million resulting from new legislation in Germany and a $0.9 million favorable adjustment recorded to recognize the reconciliation of the Company's 2006 federal tax return and tax accounts. Partially offsetting these reductions was an increase to the Company's tax contingency reserves.

Discontinued operations

The Company's businesses classified as discontinued operations recorded losses of $2.0 million, net of taxes, in 2007. These results included an operating loss of $1.4 million, a pre-tax impairment charge of $2.6 million recorded in connection with the write-down of long-lived assets to fair value less cost to sell, and a tax benefit of $0.7 million related to a reduction in the Company's deferred tax asset valuation allowance, resulting from the utilization of a capital loss carryforward to offset a portion of the capital gain on the sale of an equity investment.

The Company's discontinued operations recorded income of $0.3 million net of taxes for 2006. The after-tax earnings of discontinued operations in 2006 included a tax benefit of $1.6 million associated with a decrease in the Company's deferred tax asset valuation allowance described above. The change in the valuation allowance resulted from the settlement of negotiations regarding the terms of sale of a discontinued operation which established the characterization of certain gains and losses.

Net income The Company recorded net income of $44.4 million, or $0.36 per diluted share, in 2007, compared to net income of $63.5 million, or $0.46 per diluted share, in 2006. Income from continuing operations for 2007 was $46.4 million, or $0.37 per diluted share, compared to income from continuing operations of $63.2 million, or $0.46 per diluted share, in the prior year.

Quarterly Results of Operations

The following table presents selected data from the Company's consolidated statements of operations for the eight quarters ended December 31, 2008. This unaudited information has been prepared on the same basis as the audited consolidated financial statements appearing elsewhere in this annual report. All adjustments that management considers necessary for the fair presentation of the unaudited information have been included in the quarters presented.

QUARTERLY STATEMENTS OF OPERATIONS DATA (UNAUDITED)

	2007				2008			
(In thousands)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Net sales	$159,571	$153,508	$151,811	$161,348	$148,227	$147,947	$ 145,789	$ 112,736
Gross profit	68,508	65,494	65,510	66,725	63,988	59,887	55,398	32,242
Selling, general and administrative expenses	41,445	39,830	39,267	43,376	43,322	37,105	35,373	31,731
Engineering, research and development expenses	10,534	9,679	9,409	10,105	10,501	10,362	10,284	8,939
Amortization of intangible assets	4,499	4,487	4,716	5,172	5,087	4,552	4,858	5,088
Impairment of goodwill	—	—	—	—	—	—	379,810	93,989
Restructuring charges	—	—	—	—	—	—	3,332	7,091
Operating profit (loss)	12,030	11,498	12,118	8,072	5,078	7,868	(378,259)	(114,596)
Net income (loss)	10,383	14,777	8,417	10,782	2,865	4,933	(393,002)	(131,798)
(Percent of net sales)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Net sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Gross profit	42.9	42.7	43.2	41.4	43.2	40.5	38.0	28.6
Selling, general and administrative expenses	26.0	25.9	25.9	26.9	29.2	25.1	24.3	28.1
Engineering, research and development expenses	6.6	6.3	6.2	6.3	7.1	7.0	7.1	7.9
Amortization of intangibles	2.8	2.9	3.1	3.2	3.4	3.1	3.3	4.5
Impairment of goodwill	—	—	—	—	—	—	260.5	83.4
Restructuring charges	—	—	—	—	—	—	2.3	6.3
Operating profit (loss)	7.5	7.5	8.0	5.0	3.4	5.3	(259.5)	(101.6)
Net income (loss)	6.5	9.6	5.5	6.7	1.9	3.3	(269.6)	(116.9)

Our quarterly results of operations have been, and will likely continue to be, subject to significant fluctuations due to a variety of factors, a number of which are beyond the Company's control.

Reflecting the downturn in the semiconductor industry and general economic conditions, the Company's net sales declined 30% in the fourth quarter of 2008 compared to the comparable 2007 period, resulting in a significantly reduced gross profit for the quarter. In the third and fourth quarters of 2008, the Company's results included goodwill impairment losses of $379.8 million and $94.0 million, respectively. The third and fourth quarter of 2008 also included incremental charges of $5.7 million and $7.8 million, respectively, associated with the write-up of inventory to fair value in connection with acquisition of POCO in August 2008. These factors contributed to significant net losses for the Company for those quarters.

Liquidity and Capital Resources

The Company has historically financed its operations and capital requirements through cash flow from operating activities, long-term loans, lease financing and borrowings under domestic and international short-term lines of credit.

Operating activities Net cash flow provided by operating activities totaled $66.3 million for the year ended December 31, 2008 (2008). Cash flow was provided by the Company's operations, net of various non-cash charges, including impairment of goodwill of $473.8 million, depreciation and amortization of $46.3 million, share-based compensation expense of $7.0 million and a $13.5 million incremental charge associated with the fair market value write-up of inventory acquired in the acquisition of POCO.

Working capital stood at $233.8 million at December 31, 2008, including $115.0 million in cash and cash equivalents, down from $256.9 million as of December 31, 2007, including $160.7 million in cash and cash equivalents.

During 2008, accounts receivable, net of foreign currency translation adjustments, decreased by $53.4 million, reflecting lower sales and an improvement in the Company's days sales outstanding, which were 57 days at year end compared to 63 days at the beginning of the year. Inventories decreased by $1.9 million from December 31, 2008, net of foreign currency translation adjustments and the addition of inventory acquired with the POCO acquisition.

Accounts payable and accrued expenses were $35.5 million lower than reported at December 31, 2007. This decrease mainly reflects the payment of 2007 incentive compensation in 2008, with no incentive compensation accrued as of December 31, 2008. Income taxes payable and refundable income taxes decreased by $18.9 million in 2008, with the Company making payments net of refunds of $23.3 million.

Investing activities Cash flow used in investing activities totaled $199.9 million in 2008. The purchase price for the acquisition of POCO in August 2008 totaled $162.9 million. In 2008, the Company invested $11.0 million to purchase equity interests in three privately held technology companies. Expenditures for acquisition of property and equipment totaled $27.0 million and primarily consisted of additions of manufacturing equipment, tooling and information systems. The Company expects total capital expenditures in 2009 to be approximately $16 million.

Financing activities Net cash provided by financing activities totaled $82.7 million during 2008. The Company made payments of $64.7 million on outstanding borrowings and received proceeds of $173.8 million from new borrowings.

During 2008, the Company purchased 4.0 million shares of its common stock at a total cost of $28.9 million under a Rule 10b-5-1 trading plan authorized by the Company's Board of Directors. The Company received proceeds of $3.1 million in connection with common shares issued under the Company's stock option and employee stock purchase plans.

On February 15, 2008, the Company entered into a credit agreement with Wells Fargo Bank, National Association, as agent, and certain other banks. The agreement provides for a $230 million revolving credit facility (the Facility) for a period of five years with an uncommitted option to expand the Facility by up to $20 million provided that no default or event of default has occurred or is continuing at such time. The Facility replaced the Company's credit agreement, executed in June 2007 between the Company and Wells Fargo Bank, National Association, as agent, and certain other banks. The Company generally may elect that the loans comprising each borrowing bear interest at a rate per annum equal to (a) the Base Rate equal to the higher of the Prime Rate then in effect and the Federal Funds Rate then in effect, plus 0.50% or (b) a LIBOR rate plus a LIBOR Margin ranging from 1.00% to 1.50% depending on leverage. As of December 31, 2008, $139.0 million was outstanding under the Facility.

At December 31, 2008, the Company's shareholders' equity was $336.2 million, down 61% from $852.3 million at the beginning of the period. The decrease is primarily a result of the Company's fiscal 2008 net loss of $517.0 million.

As of December 31, 2008, the Company's sources of available funds comprised $115.0 million in cash and cash equivalents, as well as funds available under various credit facilities. Entegris has a credit agreement with one domestic commercial bank with available borrowing capacity of $90.1 million, with $139.0 million borrowings outstanding as of December 31, 2008. The Company also has a line of credit with three international banks that provide for borrowings of currencies for two of the Company's overseas subsidiaries, equivalent to an aggregate of approximately $19.6 million. There were no borrowings outstanding on these three international lines of credit at December 31, 2008.

As described in greater detail in Note 23 to its consolidated financial statements, the Company executed an amended domestic credit agreement in February 2009, which expires in November 2011, with a total borrowing capacity of $150 million.

As described in Note 23 to the Company's consolidated financial statements, the Company executed a new $150 million domestic credit agreement in February 2009, which expires in November 2011, with initial borrowing capacity of $139 million, with an additional $11 million available at the discretion of the majority of the Company's banks.

A global credit market crisis has created a very difficult business environment. These conditions have generally worsened since October 2008. The Company's operating performance, as well as its liquidity position, has been and continues to be negatively affected by these economic conditions, many of which are beyond its control. The Company does not believe it is likely that these adverse economic conditions, and their effect on the semiconductor industry, will improve significantly in the near term. However, the effect of current global economic environment on the semiconductor industry requires that the Company maintain its near-term liquidity support.

The amended credit facility requires that the Company meet various financial covenants. If the Company's future financial performance fails to meet these financial covenants, then its lenders may take control of the Company's cash receipts from the collection of its receivables as well as certain other assets. In this event, the Company's ability to conduct business could be severely impeded as there can be no assurance that funds adequate in amounts and timing will be available to meet the Company's liquidity requirements.

The Company plans to manage its business during this time through a series of operating measures designed to reduce expenditures and to generate incremental cash flow through asset management initiatives. If the economic environment does not improve in 2009, the Company's planned and initiated actions may not be sufficient and could lead to possibly failing the financial debt covenants required under the amended credit facility.

The Company believes that its cash and cash equivalents, cash flow from operations and funds available under its amended domestic credit facility will be sufficient to meet its working capital and investment requirements for the next 12 months. If available liquidity is not sufficient to meet the Company's operating and debt service obligations as they come due, management's plans include reducing expenditures as necessary, or pursuing alternative arrangements through additional equity or debt financing, in order to meet the Company's cash requirements through 2009. However, there can be no assurance that any such financing would be available on commercially acceptable terms.

The following table summarizes the maturities of the Company's significant financial obligations as of December 31, 2008:

	Maturity by fiscal year						
(In thousands)	Total	2009	2010	2011	2012	2013	Thereafter
Contractual obligations related to off-balance sheet arrangements:							
Operating leases	$ 26,291	$ 8,574	$ 6,522	$3,380	$3,001	$ 2,752	$ 2,062
Foreign currency contracts	280	280	—	—	—	—	—
Total	$ 26,571	$ 8,854	$ 6,522	$3,380	$3,001	$ 2,752	$ 2,062
Contractual obligations reflected in the balance sheet:							
Long-term debt	$163,682	$13,166	$11,516	$ —	$ —	139,000	$ —
Pension obligations	$ 17,183	624	920	589	472	549	14,029
Total	$180,865	$13,790	$12,436	$ 589	$ 472	$139,549	$14,029

As described in Note 23 to the Company's consolidated financial statements, the Company amended its existing domestic credit agreement. The amended credit agreement has a maturity date of November 2011.

The Company adopted FIN 48, *Accounting for Uncertainty in Income Taxes-an Interpretation of FASB Statement No. 109* as of January 1, 2007. The Company had $5.5 million and $16.6 million of total gross unrecognized tax benefits at December 31, 2008 and 2007, respectively. The timing of any payments which could result from these unrecognized tax benefits will depend on a number of factors. Accordingly, the Company cannot make reasonably reliable estimates of the amount and period of potential cash settlements, if any, with taxing authorities.

Quantitative and Qualitative Disclosure About Market Risks

Entegris' principal financial market risks are sensitivities to interest rates and foreign currency exchange rates. The Company's interest-bearing cash equivalents and certain long-term debt are subject to interest rate fluctuations. Most of the Company's long-term debt at December 31, 2008 carries floating rates of interest. The Company's cash equivalents are instruments with maturities of three months or less. A 100 basis point change in interest rates would potentially increase or decrease annual net income by approximately $0.7 million annually.

The cash flows and earnings of the Company's foreign-based operations are subject to fluctuations in foreign exchange rates. The Company occasionally uses derivative financial instruments to manage the foreign currency exchange rate risks associated with its foreign-based operations. At December 31, 2008, the Company was party to forward contracts to deliver Euros with notional values of approximately $1.8 million. A hypothetical 10% change in the foreign currency exchange rates would potentially result in exchange gains or losses that could increase or decrease net income by approximately $0.3 million.

On February 6, 2007, the Company entered into a 10-month Japanese yen-based cross-currency interest rate swap, with aggregate notional principal amounts of 2.4 billion Japanese yen and $20 million that matured on November 30, 2007. This swap effectively hedged a portion of the Company's net investment in its Japanese subsidiary. During the term of this transaction, the Company remitted to, and received from, its counterparty interest payments based on rates that were reset quarterly equal to three-month Japanese LIBOR and three-month U.S. LIBOR rates, respectively. The Company designated this hedging instrument as a hedge of a portion of the net investment in its Japanese subsidiary, and used the spot rate method of accounting to value changes of the hedging instrument attributable to currency rate fluctuations. Accordingly, a $2.1 million adjustment in the fair market value of the hedging instrument related to changes in the spot rate was recorded as a charge to "Foreign

currency translation" within accumulated other comprehensive loss in shareholders' equity in 2007 to offset changes in a portion of the yen-denominated net investment in the Company's Japanese subsidiary and will remain there until the net investment is disposed. The Company recorded $0.7 million in net interest income in 2007 in connection with the cross-currency interest rate swap.

Impact of Inflation

The Company's consolidated financial statements are prepared on a historical cost basis, which does not completely account for the effects of inflation. Material and labor expenses are the Company's primary costs. The cost of materials, including polymers and stainless steel, was generally flat in 2008 compared to 2007 due to increased production capacity of suppliers, despite higher oil prices. Entegris expects the cost of these materials to increase slightly in 2009. Higher oil prices contributed to higher freight costs in 2008. Despite the fall in oil prices in recent months, freight costs remain above the levels experienced before last year's increase in oil prices. Labor costs, including taxes and fringe benefits rose in 2008, but slightly lower total costs can be reasonably anticipated for 2009 due to the Company's actions to align spending with expected sales volumes. The Company's products are sold under contractual arrangements with its large customers and at current market prices to other customers. Consequently, the Company can adjust its selling prices, to the extent allowed by competition and contractual arrangements, to reflect cost increases caused by inflation. However, many of these cost increases may not be recoverable.

FACTORS AND UNCERTAINTIES THAT MAY AFFECT FUTURE RESULTS

The matters discussed in this Annual Report on Form 10-K include forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include but are not limited to statements about:

- our strategy;
- our revenues;
- sufficiency of our cash resources;
- product development;
- our research and development and other expenses; and
- our operations and legal risks.

Discussions containing these forward-looking statements may be found throughout this report including in the items entitled "Business" (Item 1), "Risk Factors" (Item 1A),and "Management's Discussion and Analysis of Financial Condition and Results of Operations" (Item 7), as well as any amendments thereto reflected in subsequent filings with the SEC. These statements are based on current management expectations and are subject to substantial risks and uncertainties which could cause actual results to differ materially from the results expressed in, or implied by, these forward-looking statements. When used herein or in such statements, the words "anticipate", "believe", "estimate", "expect", "may", "will", "should" or the negative thereof and similar expressions as they relate to Entegris or its management are intended to identify such forward-looking statements. We undertake no obligation to publicly release any revisions to the forward-looking statements or reflect events or circumstances after the date of this Annual Report on Form 10-K except as required by law.

Item 7a. Quantitative and Qualitative Disclosures about Market Risk

The information required by this item can be found under the subcaption "Quantitative and Qualitative Disclosure About Market Risks" of "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7.

Item 8. Financial Statements and Supplementary Data.

The information called for by this item is set forth in the Consolidated Financial Statements covered by the Report of Independent Registered Public Accounting Firm at the end of this report.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

This item is not applicable.

Item 9A. Controls and Procedures.

(a) EVALUATION OF DISCLOURE CONTROLS AND PROCEDURES

Management evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, (the Exchange Act)), as of December 31, 2008, the end of the fiscal period covered by this report on Form 10-K. The Securities and Exchange Commission, or SEC, rules define the term "disclosure controls and procedures" to mean a company's controls and other procedures that are designed to ensure that information required to be disclosed in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time period specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in its reports filed under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Based on the evaluation of the effectiveness of our disclosure controls and procedures by our management team with the participation of the Chief Executive Officer and the Chief Financial Officer, our Chief Executive Officer and our Chief Financial Officer have concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms.

(b) MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for establishing and maintaining an adequate system of internal control over financial reporting of the Company. This system of internal financial reporting controls is designed to provide reasonable assurance that assets are safeguarded and transactions are properly recorded and executed in accordance with management's authorization. The design, monitoring and revision of the system of internal financial reporting controls involves, among other things, management's judgments with respect to the relative cost and expected benefits of specific control measures. The effectiveness of the control system is supported by the selection, retention and training of qualified personnel and an organizational structure that provides an appropriate division of responsibility and formalized procedures. The system of internal accounting controls is periodically reviewed and modified in response to changing conditions. Designated Company employees regularly monitor the adequacy and effectiveness of internal accounting controls.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Further, because of changes in conditions, the effectiveness of internal controls over financial reporting may vary over time. Our system contains control-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

Management conducted an evaluation of the effectiveness of the system of internal control over financial reporting based on the framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this evaluation, management concluded that the Company's system of internal control over financial reporting was effective as of December 31, 2008.

Effective August 11, 2008 the Company acquired Poco Graphite, Inc. In the conduct of its assessment of the effectiveness of the Company's internal control over financial reporting for the year ended December 31, 2008, management has excluded total assets of $113 million and net sales of $23 million related to Poco Graphite, Inc. that are included in the consolidated financial statements of Entegris, Inc. and subsidiaries as of and for the year ended December 31, 2008.

(c) Changes in Internal Control Over Financial Reporting

Management's actions to remediate material weaknesses

As previously reported in the Company's Annual Report on Form 10-K, as filed with the Securities & Exchange Commission on March 3, 2008, in connection with the Company's assessment of the effectiveness of its internal control over financial reporting at the end of its last fiscal year, management identified a material weakness in the internal control over its financial reporting as of December 31, 2007 related to ineffective controls over the accounting for income taxes. Specifically, the Company did not have sufficient tax personnel with adequate expertise to effectively monitor and review the process to prepare the income tax provision.

In addition, as previously reported in the Company's Quarterly Report on Form 10-Q/A for the quarter ended March 29, 2008 as filed with the Securities & Exchange Commission on August 7, 2008, in connection with the Company's assessment of the effectiveness of its internal control over financial reporting at the end of its quarter ended March 29, 2008, management identified a material weakness in the internal control over financial reporting as of March 29, 2008 related to the combined effect of two significant deficiencies in the Company's accounting for intercompany profit elimination and recording of inventory variances.

Through the course of fiscal 2008, management, with oversight from the Company's Audit & Finance Committee, worked to address these material weaknesses and in doing so effected significant changes in internal control such that both these material weaknesses were deemed by management to be remediated as of December 31, 2008.

Specifically, the Company implemented the following remediation steps to address the material weakness in it its internal controls relating to income taxes noted above:

- Hired and obtained a significant control benefit from additional experienced tax professionals with public accounting and/or public company income tax experience; and
- Continued to improve the Company's review processes and procedures over the preparation, reconciliation and analysis of its income tax provision and income tax-related accounts.

The Company also implemented the following remediation steps to address the significant deficiencies in its internal controls relating to intercompany profit elimination and the recording of inventory variances noted above:

- Improved the Company's procedures over the calculation, reconciliation, and analysis of its intercompany profit elimination; and
- Enhanced procedures and conducted significant training with accounting personnel concerning journal entry preparation, documentation and review.

As of December 31, 2008 management, through its testing of internal controls, has concluded these new procedures have effectively remediated the material weakness and significant deficiencies.

Other than the changes mentioned above to remediate the material weaknesses, there was no change in the Company's internal control over financial reporting during the most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, internal controls over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information called for by this item with respect to registrant's directors, including information relating to the independence of certain directors, identification of the audit committee and the audit committee financial expert, and with respect to corporate governance is set forth under the caption "Election of Directors" and "Corporate Governance", respectively, in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 6, 2009, and to be filed with the Securities and Exchange Commission on or about April 3, 2009, which information is hereby incorporated herein by reference.

The information called for by this item with respect to registrant's compliance with Section 16(a) of the Securities Exchange Act of 1934, as amended, is set forth under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 6, 2009, and to be filed with the Securities and Exchange Commission on or about April 3, 2009, which information is hereby incorporated herein by reference.

Information called for by this item with respect to registrant's executive officers is set forth under "Executive Officers" in Item 1 of this report.

The Company has adopted a code of ethics, the Entegris, Inc. Code of Business Ethics, which applies to all employees of the registrant, including the registrant's Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer. A copy of the Entegris, Inc. Code of Business Ethics is posted on our website at http://www.Entegris.com, under "Investor Relations—Governance". The Entegris, Inc. Code of Business Ethics is available in print to any stockholder that requests a copy. A copy of the Entegris, Inc. Code of Business Ethics may be obtained by contacting Peter W. Walcott, the Company's Senior Vice President & General Counsel, at the Company's headquarters. The Company intends to comply with the requirements of Item 10 of Form 8-K with respect to any waiver of the provisions of the Entegris, Inc. Code of Business Ethics applicable to the registrant's Chief Executive Officer, Chief Financial Officer or Chief Accounting Officer by posting notice of any such waiver at the same location on our website.

Item 11. Executive Compensation.

The information called for by this item is set forth under the caption "COMPENSATION OF EXECUTIVE OFFICERS", "MANAGEMENT DEVELOPMENT & COMPENSATION COMMITTEE" and "REPORT OF THE MANAGEMENT DEVELOPMENT & COMPENSATION COMMITTEE", respectively, in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 6, 2009, and to be filed with the Securities and Exchange Commission on or about April 3, 2009, which information is hereby incorporated herein by reference.

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

The following information is provided as of December 31, 2008 with respect to our compensation plans under which equity securities are authorized for issuance. The only equity securities currently authorized for issuance under our compensation plans are common stock for awards or options to acquire our common stock.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders[1]	6,316,164	$8.28	9,814,167[3]
Equity compensation plans not approved by security holders[2]	372,556	$8.65	1,233,667[4]
Total	6,688,720	$8.30	11,047,834

(1) Includes shares of Entegris, Inc. common stock available for award or to support option grants under the Entegris, Inc. 2001 Equity Incentive Plan, the Entegris, Inc. 1999 Long Term Incentive and Stock Option Plan, and the Entegris, Inc Outside Directors' Option Plan. The first enumerated plan contains an "evergreen" provision that annually increases the number of shares available for award or to support option grants by 1% of the number of shares of the Company's common stock outstanding on the date of each Annual Meeting of Stockholders.

(2) Includes shares of Entegris common stock available for award or to support option grants under the Entegris, Inc. 2003 Employment Inducement and Acquisition Stock Option Plan described below.

(3) This balance of remaining shares has been reduced by: **(i)** the maximum number of shares that are potentially subject to award under outstanding performance share awards in the aggregate amount of 913,794 shares; if certain financial performance criteria are not met during the award period then these awards will be forfeited and the shares will be returned to the balance of shares available for future issuance under equity compensation plans; and **(ii)** the number of outstanding restricted share awards that remain subject to a risk of forfeiture, in the aggregate amount of 1,464,343 shares; if the awardee leaves the employment of the Company before these restrictions lapse then these shares will be forfeited and returned to the balance of shares available for future issuance under equity compensation plans. Under these plans the indicated balance is available for award either as stock options, restricted stock, restricted stock units or performance shares.

(4) This balance of remaining shares has been reduced by the number of outstanding restricted share awards under this plan that remain subject to a risk of forfeiture, in the aggregate amount of 75,200 shares; if the awardee leaves the employment of the Company before these restrictions lapse then these shares will be forfeited and returned to the balance of shares available for future issuance under equity compensation plans. Under this plan the indicated balance is available for award either as stock options, restricted stock awards, deferred stock awards or awards of securities convertible into shares.

The securities issued and available for issue pursuant to equity compensation plans not approved by security holders listed in the table above refers to the Entegris, Inc. 2003 Employment Inducement and Acquisition Stock Option Plan which was adopted by the Board of Directors of Mykrolis and assumed by the Company by action of its Board of Directors effective August 10, 2005. This stock option plan originally provided for the grant of stock options covering an aggregate of 486,500 shares of the Common stock, $0.01 par value, of the Company to newly hired (or rehired) employees and to employees of companies acquired by Entegris. The plan has a term of ten years and provides that all stock options granted under the plan carry an exercise price of fair market value on the date of grant. This plan also contains an "evergreen" provision that annually increases the number of shares available for award or to support option grants by 0.25% of the number of shares of the Company's common stock outstanding on the date of each Annual Meeting of Stockholders during the term of the plan.

The information called for by Item 403 of Regulation S-K is set forth under the caption "OWNERSHIP OF ENTEGRIS COMMON STOCK" in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 6, 2009, and to be filed with the Securities and Exchange Commission on or about April 3, 2009, which information is hereby incorporated herein by reference.

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

The information called for by this item with respect to certain transactions and relationships between the registrant and directors, executive officers and five percent stockholders is set forth under the caption "MANAGEMENT AND ELECTION OF DIRECTORS-Nominees for Election as Directors" in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 6, 2009, and to be filed with the Securities and Exchange Commission on or about April 3, 2009, which information is hereby incorporated herein by reference.

Item 14. Principal Accountant Fees and Services.

The information called for by this item with respect to the fees paid to and the services performed by the registrant's principal accountant is set forth under the caption "ACCOUNTANTS" in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 6, 2009, and to be filed with the Securities and Exchange Commission on or about April 3, 2009, which information is hereby incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules, and Reports on Form 8-K.

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

1. **Financial Statements.** The Consolidated Financial Statements listed under Item 8 of this report and in the Index to Consolidated Financial Statements on page F-1 of this report that is incorporated by reference.

2. **Exhibits.**

   A. ***The following exhibits are incorporated by reference:***

Reg. S-K Item 601(b) Reference	Document Incorporated	Referenced Document on file with the Commission
(2)	Agreement and Plan of Merger, dated as of March 21, 2005, by and among Entegris, Inc., Mykrolis Corporation and Eagle DE, Inc.	Included as Annex A in the joint proxy statement/prospectus included in S-4 Registration . Statement of Entegris, Inc. and Eagle DE, Inc. (No. 333-124719)
(2)	Agreement and Plan of Merger, dated as of March 21, 2005, by and between Entegris, Inc., and Eagle DE, Inc.	Included as Annex B in the joint proxy statement/prospectus included in S-4 Registration. Statement of Entegris, Inc. and Eagle DE, Inc. (No. 333-124719)
(2)	Form of Master Separation and Distribution Agreement between Millipore Corporation and Mykrolis Corporation	Exhibit 2.1 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(2)	Form of General Assignment and Assumption Agreement between Millipore Corporation and Mykrolis Corporation	Exhibit 2.2 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(3)	Amended and Restated Certificate of Incorporation of Entegris, Inc.	Included as Annex C-2 in the joint proxy statement/prospectus included in S-4 Registration Statement of Entegris, Inc. and Eagle DE, Inc. (No. 333-124719)
(4)	Form of certificate representing shares of Common Stock, $.01 par value per share	Exhibit 4.1 to Form S-4 Registration Statement of Entegris, Inc. and Eagle DE, Inc. (No. 333-124719)
(4)	Rights Agreement dated July 26, 2005, between Entegris and Wells Fargo Bank, N.A as rights agent	Exhibit 4.1 to Entegris, Inc. (Entegris Minnesota) Current Report on Form 8-K filed with the Securities and Exchange Commission on July 29, 2005
(10)	Entegris, Inc. 1999 Long-Term Incentive and Stock Option Plan*	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)
(10)	Amendment No. 3 to Entegris, Inc. 1999 Long-Term Incentive and Stock Option Plan*	Exhibit 10.3 to Entegris, Inc. Form 10-Q Quarterly Report for the period ended June 28, 2008
(10)	Entegris, Inc. Outside Directors' Stock Option Plan*	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)

* A "management contract or compensatory plan"

Reg. S-K Item 601(b) Reference	Document Incorporated	Referenced Document on file with the Commission
(10)	Entegris, Inc. 2000 Employee Stock Purchase Plan	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)
(10)	2001 Equity Incentive Plan*	Exhibit 10.1 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(10)	Amendment No. 2 to 2001 Equity Incentive Plan*	Exhibit 10.2 to Entegris, Inc. Form 10-Q Quarterly Report for the period ended June 28, 2008
(10)	2003 Employment Inducement and Acquisition Stock Option Plan*	Exhibit 10.6 to Mykrolis Corporation Form 10-Q Quarterly Report for the period ended September 27, 2003
(10)	Amended and Restated Entegris Incentive Plan *	Exhibit 10.1 to Entegris, Inc. Form 10-Q Quarterly Report for the period ended June 28, 2008
(10)	Lease Agreement, dated April 1, 2002 Between Nortel Networks HPOCS Inc. And Mykrolis Corporation, relating to Executive office, R&D and manufacturing facility located at 129 Concord Road Billerica, MA	Exhibit 10.1.3 to Mykrolis Corporation Quarterly Report on Form 10-Q, for the period ended March 31, 2002
(10)	Master Patent License Agreement	Exhibit 10.8 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(10)	Master Patent Grantback License Agreement	Exhibit 10.9 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(10)	Master Trademark License Agreement	Exhibit 10.11 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(10)	Master Invention Disclosure Assignment	Exhibit 10.12 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(10)	Master Trade Secret and Know-How Agreement	Exhibit 10.13 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(10)	Amended and Restated Employment Agreement, dated as of May 4, 2005, by and between Mykrolis Corporation and Gideon Argov*	Exhibit 10.13 to Mykrolis Corporation's Quarterly Report on Form 10-Q for the quarter ended April 2, 2005
(10)	STAT-PRO(R) 3000 and STAT-PRO(R) 3000E Purchase and Supply Agreement between Fluoroware, Inc. and Miller Waste Mills, d/b/a RTP Company, dated April 6, 1998	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)
(10)	PFA Purchase and Supply Agreement by and between E.I. Du Pont De Nemours and Company and Fluoroware, Inc., dated January 7, 1999, which was made effective retroactively to November 1, 1998, and supplemented by the Assignment and Limited Amendment by and between the same parties and Entegris, Inc., dated as of September 24, 1999	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)

* A "management contract or compensatory plan"

Reg. S-K Item 601(b) Reference	Document Incorporated	Referenced Document on file with the Commission
(10)	Credit Agreement, dated as of February 15, 2008, among Entegris, Inc., the Banks (as defined therein) Wells Fargo Bank NA, as agent, Citibank, as syndication Agent and RBS Citizens Bank, as documentation agent	Exhibit 10.1 to Entegris, Inc. Quarterly Report on Form 10-Q for the quarter ended March 29, 2008
(10)	Form of Indemnification Agreement between Entegris, Inc. and each of its executive officers and Directors	Exhibit 10.30 to Entegris, Inc. Annual Report on form 10- K for the period ended August 27, 2005
(10)	Form of Executive Change of Control Termination Agreement between Entegris, Inc. and each of its executive officers*	Exhibit 10.31 to Entegris, Inc. Annual Report on Form 10-K for the period ended August 27, 2005
(10)	Entegris, Inc. 401 (k) Savings and Profit Sharing Plan (2005 Restatement)*	Exhibit 10.35 to Entegris, Inc. Annual Report on Form 10-K for the period ended August 27, 2005
(10)	Form of Entegris, Inc. Restricted Stock Award Agreement*	Exhibit 10.2 to Entegris, Inc. Quarterly Report on Form 10-Q for the period ended November 27, 2005
(10)	Entegris, Inc.—Form of 2006 Equity Incentive Award Agreement	Exhibit 10.1 to Entegris, Inc. Quarterly Report on Form 10-Q for the period ended April 1, 2006,
(10)	Translation of Loan Agreement, dated November 2, 2007, between Nihon Entegris KK and Summitomo Mitsui Banking Corporation	Exhibit 10.1 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2007
(10)	Translation of Specialized Overdraft Account Agreement, dated November 2, 2007, between Nihon Entegris KK and Bank of Tokyo-Mitsubishi UFJ, Ltd.	Exhibit 10.2 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2007
(10)	Agreement and Plan of Merger and Amendment #1 thereto by and among Entegris, Inc. Entegris Acquisition Co. LLC, Poco Graphite, Inc. and Poco Graphite Holdings LLC, dated July 13, 2008	Exhibits 99.1 and 99.2 to Entegris, Inc. Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 11, 2008
(10)	Executive Termination Agreement, dated July 7, 2008 between Entegris, Inc. and Jean-Marc Pandraud*	Exhibit 10.2 to Entegris, Inc. Quarterly Report on Form 10-Q for the period ended September 27, 2008
(10)	Severance Agreement, dated July 7, 2008 between Entegris, Inc. and Gregory B. Graves*	Exhibit 10.3 to Entegris, Inc. Quarterly Report on Form 10-Q for the period ended September 27, 2008
(10)	Trust Agreement between Entegris, Inc. Fidelity Management Trust Company and Entegris Inc. 401(k) Savings and Profit Sharing Plan Trust, dated December 29, 2007.	Exhibit 10.3 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2007

* A “management contract or compensatory plan”

Reg. S-K Item 601(b) Reference	Document Incorporated	Referenced Document on file with the Commission
(10)	Entegris, Inc. 2007 Deferred Compensation Plan*	Exhibit 10.2 to Entegris, Inc. Quarterly Report on Form 10-Q for the fiscal period ended June 30, 2007
(10)	Entegris, Inc.—Form of 2007 Equity Incentive Award Agreement*	Exhibit 10.4 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2007

B. The Company hereby files as exhibits to this Annual Report on Form 10-K the following documents:

Reg. S-K Item 601(b) Reference	Exhibit No.	Documents Filed Herewith
(3)	3	By-Laws of Entegris, Inc., as amended December 17, 2008 (revised to correct typographical errors)
(10)	10.1	Second Amended and Restated Membrane Manufacture and Supply Agreement, dated December 19, 2008, by and between Entegris, Inc. and Millipore Corporation
(10)	10.2	Amended and Restated Supplemental Executive Retirement Plan for Key Salaried Employees*
(10)	10.3	Entegris, Inc.—Form of 2008 Equity Incentive Award Agreement*
(21)	21	Subsidiaries of Entegris, Inc.
(23)	23	Consent of Independent Registered Public Accounting Firm
(24)	24	Power of Attorney by the Directors of Entegris, Inc.
(31)	31.1	Certification required by Rule 13a-14(a) in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.
(31)	31.2	Certification required by Rule 13a-14(a) in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.
(32)	32.1	Certification required by Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
(32)	32.2	Certification required by Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* A “management contract or compensatory plan”

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.

ENTEGRIS, INC.

Dated: March 2, 2009

By /s/ GIDEON ARGOV

Gideon Argov
President & Chief Executive Officer

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

SIGNATURE	TITLE	DATE
/s/ GIDEON ARGOV **Gideon Argov**	Chief Executive Officer and Director	March 2, 2009
/s/ GREGORY B. GRAVES **Gregory B. Graves**	Chief Financial Officer	March 2, 2009
/s/ LYNN BLAKE **Lynn Blake**	Chief Accounting Officer	March 2, 2009
ROGER D. MCDANIEL* **Roger D. McDaniel**	Director (Chairman of the Board)	March 2, 2009
MICHAEL A. BRADLEY* **Michael A. Bradley**	Director	March 2, 2009
MICHAEL P.C. CARNS* **Michael P.C. Carns**	Director	March 2, 2009
DANIEL W. CHRISTMAN* **Daniel W. Christman**	Director	March 2, 2009
GARY F. KLINGL* **Gary F. Klingl**	Director	March 2, 2009
PAUL L.H. OLSON* **Paul L.H. Olson**	Director	March 2, 2009
BRIAN F. SULLIVAN* **Brian F. Sullivan**	Director	March 2, 2009

*By /s/ PETER W. WALCOTT

PETER W. WALCOTT, ATTORNEY-IN-FACT

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders
Entegris, Inc.:

We have audited the accompanying consolidated balance sheets of Entegris, Inc. and subsidiaries as of December 31, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended December 31, 2008. We also have audited the Company'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 (COSO). The Company's management is responsible for these consolidated financial statements, 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 Item 9A.(b) *Management's Report on Internal Control Over Financial Reporting*. Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the consolidated financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Entegris, Inc. and subsidiaries as of December 31, 2008 and 2007, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2008, in conformity with U.S. generally accepted accounting principles. Also in our opinion, Entegris, Inc. and subsidiaries maintained, in all material respects, effective 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 scope of management's assessment of internal control over financial reporting as of December 31, 2008 includes all of the subsidiaries of Entegris, Inc. except for Poco Graphite, Inc., which was acquired on August 11, 2008. The consolidated net sales of Entegris, Inc. and subsidiaries for the year ended December 31, 2008 were $555 million of which Poco Graphite, Inc. represented $23 million. The consolidated total assets of Entegris, Inc. and subsidiaries as of December 31, 2008 were $598 million of which Poco Graphite, Inc. represented $113 million. Our audit of internal control over financial reporting of Entegris, Inc. also excluded an evaluation of the internal control over financial reporting of Poco Graphite, Inc.

As discussed in Note 16 to the consolidated financial statements, the Company adopted the provisions of Financial Accounting Standards Board Interpretation No. 48, "*Accounting for Uncertainty in Income Taxes an interpretation of FASB Statement No. 109"* as of January 1, 2007.

As discussed in Note 19 to the consolidated financial statements, the Company adopted the provisions of Financial Accounting Standards Board Statement No. 157, "*Fair Value Measurements"* as of January 1, 2008.

/s/ KPMG LLP

Minneapolis, Minnesota
March 2, 2009

ENTEGRIS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(In thousands, except share data)	December 31, 2008	December 31, 2007
ASSETS		
Current assets:		
Cash and cash equivalents	$ 115,033	$ 160,655
Trade accounts and notes receivable, net	70,535	112,053
Inventories	102,189	73,120
Deferred tax assets, deferred tax charges and refundable income taxes	14,661	23,238
Assets of discontinued operations and other assets held for sale	2,450	4,187
Other current assets	8,260	9,368
Total current assets	313,128	382,621
Property, plant and equipment, net	159,738	121,157
Other assets:		
Investments	14,003	13,871
Goodwill	—	402,125
Other intangible assets, net	93,139	76,370
Deferred tax assets and other noncurrent tax assets	13,315	35,323
Other	4,501	3,774
Total assets	$ 597,824	$1,035,241
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 13,166	$ 9,310
Short-term borrowings	—	17,802
Accounts payable	21,782	24,260
Accrued liabilities	36,971	57,657
Deferred tax liabilities and income taxes payable	7,437	12,495
Liabilities of discontinued operations	—	4,225
Total current liabilities	79,356	125,749
Long-term debt, less current maturities	150,516	20,373
Pension benefit obligations and other liabilities	24,559	21,320
Deferred tax liabilities and other noncurrent tax liabilities	7,223	15,490
Commitments and contingent liabilities	—	—
Shareholders' equity:		
Preferred stock, par value $.01; 5,000,000 shares authorized; none issued and outstanding as of December 31, 2008 and 2007	—	—
Common stock, par value $.01; 400,000,000 shares authorized; issued and outstanding shares: 113,101,535 and 115,355,560	1,131	1,154
Additional paid-in capital	684,974	701,510
Retained (deficit) earnings	(376,247)	145,462
Accumulated other comprehensive income	26,312	4,183
Total shareholders' equity	336,170	852,309
Total liabilities and shareholders' equity	$ 597,824	$1,035,241

See the accompanying notes to consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)	Year ended December 31, 2008	Year ended December 31, 2007	Year ended December 31, 2006
Net sales	$ 554,699	$626,238	$672,882
Cost of sales	343,184	360,001	367,804
Gross profit	211,515	266,237	305,078
Selling, general and administrative expenses	147,531	163,918	170,702
Engineering, research and development expenses	40,086	39,727	38,074
Amortization of intangible assets	19,585	18,874	17,609
Impairment of goodwill	473,799	—	—
Restructuring charges	10,423	—	—
Operating (loss) profit	(479,909)	43,718	78,693
Interest expense (income), net	1,018	(5,245)	(9,205)
Other expense (income), net	15,486	(7,656)	(1,658)
(Loss) income before income taxes and equity in net loss (earnings) of affiliates	(496,413)	56,619	89,556
Income tax expense	19,201	10,356	26,936
Equity in net loss (earnings) of affiliates	283	(93)	(531)
(Loss) income from continuing operations	(515,897)	46,356	63,151
(Loss) income from operations of discontinued businesses, net of taxes	(1,105)	(891)	315
Impairment loss on assets of discontinued businesses, net of taxes	—	(1,106)	—
(Loss) income from discontinued operations, net of taxes	(1,105)	(1,997)	315
Net (loss) income	$(517,002)	$ 44,359	$ 63,466
Basic (loss) earnings per common share:			
Continuing operations	$ (4.58)	$ 0.38	$ 0.47
Discontinued operations	(0.01)	(0.02)	0.00
Net (loss) income	$ (4.59)	$ 0.36	$ 0.47
Diluted (loss) earnings per common share:			
Continuing operations	$ (4.58)	$ 0.37	$ 0.46
Discontinued operations	(0.01)	(0.02)	0.00
Net (loss) income	$ (4.59)	$ 0.36	$ 0.46
Weighted shares outstanding			
Basic	112,653	122,557	135,116
Diluted	112,653	124,940	138,492

See the accompanying notes to consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY AND COMPREHENSIVE INCOME (LOSS)

(In thousands)	**Common shares outstanding**	**Common stock**	**Additional paid-in capital**	**Prepaid Forward Contract for Share Repurchase**	**Retained earnings**	**Accumulated other comprehensive income (loss)**	**Total**	**Comprehensive income (loss)**
Balance at December 31, 2005	136,044	1,360	809,012	—	206,936	(4,489)	1,012,819	
Shares issued under employee stock plans	5,607	57	19,962	—	—	—	20,019	
Share-based compensation expense		—	14,776	—	—	—	14,776	
Repurchase and retirement of common stock	(8,880)	(89)	(53,445)	(5,000)	(41,466)	—	(100,000)	
Tax benefit associated with stock plans	—	—	2,753	—	—	—	2,753	
Foreign currency translation	—	—	—	—	—	2,171	2,171	$ 2,171
Net change in unrealized gain on marketable securities, net of tax	—	—	—	—	—	204	204	204
Minimum pension liability adjustment to initially apply SFAS No. 158	—	—	—	—	—	(228)	(228)	—
Net income	—	—	—	—	63,466	—	63,466	63,466
Total comprehensive income								$ 65,841
Balance at December 31, 2006	132,771	$1,328	$ 793,058	$(5,000)	$ 228,936	$ (2,342)	$1,015,980	
Adoption of FIN No. 48	—	—	—	—	1,110	—	1,110	
Adjusted beginning balance	132,771	$1,328	$ 793,058	$(5,000)	$ 230,046	$ (2,342)	$1,017,090	
Shares issued under employee stock plans	4,573	46	29,810				29,856	
Share-based compensation expense		—	10,344	—	—	—	10,344	
Repurchase and retirement of common stock	(21,988)	(220)	(131,946)	5,000	(128,943)	—	(256,109)	
Tax benefit associated with stock plans	—	—	244	—	—	—	244	
Foreign currency translation	—	—	—	—	—	7,383	7,383	$ 7,383
Net change in unrealized gain on marketable securities, net of tax	—	—	—	—	—	(135)	(135)	(135)
Minimum pension liability adjustment	—	—	—	—	—	(723)	(723)	(723)
Net income	—	—	—	—	44,359	—	44,359	44,359
Total comprehensive income								$ 50,884
Balance at December 31, 2007	115,356	$1,154	$ 701,510	$ —	$ 145,462	$ 4,183	$ 852,309	
Shares issued under employee stock plans	1,717	17	3,080				3,097	
Share-based compensation expense		—	7,024	—	—	—	7,024	
Repurchase and retirement of common stock	(3,971)	(40)	(24,148)	—	(4,707)	—	(28,895)	
Tax shortfall associated with stock plans	—	—	(2,492)	—	—	—	(2,492)	
Foreign currency translation	—	—	—	—	—	23,139	23,139	$ 23,139
Minimum pension liability adjustment	—	—	—	—	—	(1,010)	(1,010)	(1,010)
Net loss	—	—	—	—	(517,002)	—	(517,002)	(517,002)
Total comprehensive (loss)								$(494,873)
Balance at December 31, 2008	113,102	$1,131	$ 684,974	$ —	$(376,247)	$26,312	$ 336,170	

ENTEGRIS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY AND COMPREHENSIVE INCOME (LOSS)

The accumulated balances for each component of accumulated other comprehensive income (loss) are as follows:

(In thousands)	Foreign currency translation	Net unrealized gain (loss) on marketable securities	Minimum pension liability adjustment	Total accumulated other comprehensive income (loss)
Balance at December 31, 2005	$ (4,420)	$ (69)	$ —	$ (4,489)
Foreign currency translation	2,171	—	—	2,171
Change in unrealized gain on marketable securities, net of tax of $125	—	204	—	204
Minimum pension liability adjustment, net of tax of $113	—	—	(228)	(228)
Balance at December 31, 2006	$ (2,249)	$ 135	$ (228)	$ (2,342)
Foreign currency translation	7,383	—	—	7,383
Change in unrealized gain on marketable securities, net of tax of $83	—	(135)	—	(135)
Minimum pension liability adjustment, net of tax of $522	—	—	(723)	(723)
Balance at December 31, 2007	$ 5,134	$ —	$ (951)	$ 4,183
Foreign currency translation	23,139	—	—	23,139
Minimum pension liability adjustment, net of tax of $648	—	—	(1,010)	(1,010)
Balance at December 31, 2008	$28,273	$ —	$(1,961)	$26,312

See the accompanying notes to consolidated financial statements

ENTEGRIS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	Year ended December 31, 2008	Year ended December 31, 2007	Year ended December 31, 2006
Operating activities:			
Net (loss) income	$(517,002)	$ 44,359	$ 63,466
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Loss (income) from discontinued operations	1,105	1,997	(315)
Depreciation	26,758	24,902	25,296
Amortization	19,585	18,874	17,609
Stock-based compensation expense	7,024	10,344	14,776
Impairment of property and equipment	1,388	4,098	1,505
Impairment of goodwill	473,799	—	—
Impairment of intangibles	—	235	—
Impairment of equity investments	11,698	—	—
Provision for doubtful accounts	697	(227)	(508)
Deferred tax valuation allowance	42,093	—	—
Provision for deferred income taxes	(26,443)	(20,434)	11,155
Charge for fair value mark-up of acquired inventory sold	13,519	836	—
Excess tax benefit from employee stock plans	—	(244)	(3,031)
Equity in net loss (earnings) of affiliates	283	(93)	(531)
Gain on sale of property and equipment	(63)	(274)	(903)
Gain on sale of equity investments	—	(6,068)	—
Changes in operating assets and liabilities, excluding effects of acquisitions:			
Trade accounts receivable and notes receivable	53,355	20,054	(16,960)
Inventories	1,922	24,061	(24,280)
Accounts payable and accrued liabilities	(35,523)	(2,935)	(10,357)
Other current assets	1,195	(1,695)	3,189
Income taxes payable and refundable income taxes	(18,873)	14,682	7,669
Other	9,743	(455)	8,296
Net cash provided by operating activities	66,260	132,017	96,076
Investing activities:			
Acquisition of property and equipment	(26,987)	(26,919)	(30,860)
Acquisition of businesses, net of cash acquired	(162,852)	(44,911)	—
Proceeds from sales of property and equipment	900	2,021	3,866
Proceeds from sale of equity investments	—	6,568	—
Purchase of equity investments	(10,982)	(6,126)	—
Purchases of short-term investments	—	(269,822)	(170,205)
Proceeds from sale or maturities of short-term investments	—	390,915	181,412
Other	—	(926)	(1,583)
Net cash (used in) provided by investing activities	(199,921)	50,800	(17,370)
Financing activities:			
Principal payments on short-term borrowings and long-term debt	(64,707)	(88,115)	(3,087)
Proceeds from short-term borrowings and long-term debt	173,811	131,063	—
Repurchase and retirement of common stock	(28,895)	(256,109)	(100,000)
Excess tax benefit from employee stock plans	—	244	3,031
Payment for debt issue costs	(625)	—	—
Issuance of common stock	3,097	29,856	20,019
Net cash provided by (used in) financing activities	82,681	(183,061)	(80,037)
Discontinued operations:			
Net cash (used in) provided by operating activities	(1,878)	1,237	1,754
Net cash provided by investing activities	735	—	13,017
Net cash (used in) provided by discontinued operations	(1,143)	1,237	14,771
Effect of exchange rate changes on cash and cash equivalents	6,501	4,856	(1,472)
(Decrease) increase in cash and cash equivalents	(45,622)	5,849	11,968
Cash and cash equivalents at beginning of period	160,655	154,806	142,838
Cash and cash equivalents at end of period	$ 115,033	$ 160,655	$ 154,806
Supplemental Cash Flow Information			
Non-cash transactions:			
Equipment purchases in accounts payable	$ 4,737	$ 1,198	—
Schedule of interest and income taxes paid:			
Interest paid	$ 2,772	$ 691	$ 463
Income taxes, net of refunds received	$ 23,300	$ 3,794	$ 2,502

See accompanying notes to consolidated financial statements.

ENTEGRIS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations and Principles of Consolidation Entegris is a leading provider of a wide range of products for purifying, protecting and transporting critical materials used in processing and manufacturing in the semiconductor and other high-technology industries. The consolidated financial statements include the accounts of the Company and its majority-owned subsidiaries. Intercompany profits, transactions and balances have been eliminated in consolidation.

The Company was incorporated in Delaware in June 2005 under the name Eagle DE, Inc. (Eagle DE) as a wholly owned subsidiary of Entegris, Inc., a Minnesota corporation (Entegris Minnesota). Effective August 6, 2005, Entegris Minnesota and Mykrolis Corporation, a Delaware corporation, completed a strategic merger of equals transaction, pursuant to which they were each merged into the Company to carry on the combined businesses. Pursuant to the merger the Company's name was changed to Entegris, Inc. The stock-for-stock transaction was accounted for under the purchase method of accounting as an acquisition of Mykrolis by the Company.

Fiscal Year On December 13, 2005, the Company's Board of Directors approved a change in fiscal year end from a 52-week or 53-week fiscal year period ending on the last Saturday of August to a fiscal year ending December 31. The Company's new fiscal quarters consist of 13 week periods that end on Saturday, except in the fourth quarter. The Company's fiscal quarters in 2008 ended on March 29, 2008, June 28, 2008, September 27, 2008 and December 31, 2008.

Basis of Presentation The accompanying consolidated financial statements have been prepared on a going concern basis.

The Company had a net loss of $517.0 million in fiscal 2008, including a fourth quarter net loss of $131.7 million, which included after-tax goodwill impairment charges of $454.6 million and $89.4 million, respectively. Revenues declined sharply in the fourth quarter of 2008 to $112.7 million down from $145.8 million in the third quarter 2008 and from $161.3 million in the fourth quarter of 2007. The revenue run rate for the first seven weeks of 2009 is down significantly from what the Company experienced in the fourth quarter of 2008. As a result of this poor business environment, the Company projected that it would violate the debt covenants in its $230 revolving credit facility in the first half of 2009. Therefore, the Company's management, working with its banks, undertook amending its $230 million revolving credit facility. On March 2, 2009, the Company entered into a $150 million amended revolving credit facility. The $150 million amended revolving credit facility allows the Company to borrow up to $139 million based on its current borrowing base with an additional $11 million available at the discretion of the majority of its banks. As of December 31, 2008 and February 27, 2009, the Company has $139 million outstanding. The amended revolving credit facility requires the Company to maintain compliance with new debt covenants and to pay higher rates of interest (see Note 23 to the Company's consolidated financial statements).

While the Company has taken significant action to date including the announcement of the closure of its largest Chaska facility that will ultimately result in the layoff of approximately 200 employees and the reduction of exempt employees' wages by an aggregate annual amount in excess of $5.0 million, further actions will be necessary if revenue levels do not improve in the very near term. At current 2009 revenue levels, the Company's management will be required to act upon its identified contingency plan to significantly reduce operating expenses further in order to avoid violating the covenants in the $150 million amended revolving credit facility. These reductions, if necessary, would include such items as furloughs, permanent headcount reductions, office closures, further reductions in discretionary spending, elimination of certain new product development initiatives and other cost reduction measures. Certain of the contingency plan actions may likely need to be implemented late in the first quarter to realize the financial benefits necessary to maintain compliance with the Company's

debt covenants. While there can be no assurances that these actions will be sufficient, such contingency plans are within the Company's control. Further, the Company has the intent and ability to execute as necessary and believes such benefits are achievable. However, there can be no assurance that these additional operating expense reductions will not have a lasting negative impact on the Company's long term business prospects.

In the second quarter and year ended December 31, 2008, the Company identified certain errors in its inventory accounts related to its fiscal year ended December 31, 2007. The impact of correcting these errors in the second quarter decreased cost of goods sold by $0.7 million with a corresponding increase to inventory. Associated with the correction of this error, the Company increased income tax expense by $0.2 million with a corresponding increase to income taxes payable resulting in an increase in net income of $0.5 million. Neither the origination nor the correction of the errors was material to the Company's consolidated financial statements.

Use of Estimates and Risks and Uncertainties The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, particularly receivables, inventories, property, plant and equipment, and intangibles, accrued expenses and income taxes and related accounts, and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. See Note 2 as to the use of estimates in connection with the Company's review of its long-lived assets.

The Company is experiencing significant revenue deterioration due to a severe downturn in both the capital and unit-driven segments of the semiconductor industry that began during the second half of 2008. The Company is unable to predict the ultimate duration and severity of this downturn or the timing of a recovery, if any, for the semiconductor industry. The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, particularly receivables, inventories, property, plant and equipment, and intangibles, accrued expenses and income taxes and related accounts, and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. See Note 2 as to the use of estimates in connection with the Company's review of its long-lived assets.

Under its $150 million amended credit facility, dated March 2, 2009, the Company is at its borrowing cap of $139 million. The borrowing cap can be adjusted downward if the Company's level of qualifying US accounts receivable, inventories and value of property plant and equipment were to decline from current levels. The remaining $11 million of the credit facility may not be borrowed unless a majority of the lenders consent. The Company's amended credit agreement contains various financial covenants that limit its ability to purchase no more than $16 million in capital equipment in 2009 and no more than $20 million in 2010; requires that the Company maintain a minimum level of cash in the United States; and achieve certain levels of EBITDA performance during 2009 and the first quarter of 2010.

During the first two months of 2009 the Company's revenue levels have declined significantly from those it experienced during the fourth quarter of 2008 which has a negative impact on its ability to remain compliant with the EBITDA levels as required by the Company's debt covenants. If revenue continues at these levels for the balance of 2009, at the current operating expense levels, the Company will violate the financial covenants of its amended credit agreement during 2009. In the event that revenue levels do not improve in the very near term, management will be required to act upon its identified contingency plan to significantly reduce operating expenses in order to avoid violating those covenants. These reductions, if necessary, would include such items as furloughs, permanent headcount reductions, office closures, further reductions in discretionary spending, elimination of certain new product development initiatives and other cost reduction measures. Certain of the contingency plan actions may likely need to be implemented late in the first quarter to realize the financial benefits necessary to maintain debt compliance.

Concentrations of Suppliers Certain materials included in the Company's products are obtained from a single source or a limited group of suppliers. Although the Company seeks to reduce dependence on those sole and

limited source suppliers, the partial or complete loss of these sources could have at least a temporary adverse effect on the Company's results of operations. Furthermore, a significant increase in the price of one or more of these components could adversely affect the Company's results of operations.

Share-based Compensation The Company accounts for share-based compensation in accordance with Statement of Financial Accounting Standard ("SFAS") No. 123R, *Share-Based Payment*. SFAS No. 123R requires the Company to measure the cost of employee services received in exchange for the award of equity instruments based on the fair value of the award at the date of grant. The cost is to be recognized over the period during which an employee is required to provide services in exchange for the award.

Cash, Cash Equivalents and Short-term Investments Cash and cash equivalents include cash on hand and highly liquid debt securities with original maturities of three months or less, which are valued at cost which approximates fair value. Debt securities with original maturities greater than three months and remaining maturities of less than one year are classified and accounted for as available for sale and are recorded at fair value, and are classified as short-term investments.

Allowance for Doubtful Accounts An allowance for uncollectible trade receivables is estimated based on a combination of write-off history, aging analysis and any specific, known troubled accounts.

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

Property, Plant, and Equipment Property, plant and equipment are carried at cost and are depreciated principally on the straight-line method over the estimated useful lives of the assets. When assets are retired or disposed of, the cost and related accumulated depreciation are removed from the accounts, and gains or losses are recognized in the same period. Maintenance and repairs are expensed as incurred; significant additions and improvements are capitalized. Property, plant and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or group of asset(s) may not be recoverable based on estimated future undiscounted cash flows. The amount of impairment, if any, is measured as the difference between the net book value and the estimated fair value of the asset(s).

Investments The Company's nonmarketable investments are accounted for under either the cost or equity method of accounting, as appropriate. All equity investments are periodically reviewed to determine whether declines, if any, in fair value below cost basis are other-than-temporary. If the decline in fair value is determined to be other-than-temporary, an impairment loss is recorded and the investment written down to a new cost basis.

Fair Value of Financial Instruments The carrying value of cash equivalents, accounts receivable, accounts payable and short-term debt approximates fair value due to the short maturity of those instruments. The fair value of long-term debt was estimated using discounted cash flows based on market interest rates for similar instruments and approximated its carrying value at December 31, 2008.

Goodwill and Other Intangible Assets Goodwill is the excess of the purchase price over the fair value of net assets of acquired businesses. The Company does not amortize goodwill, but tests for impairment at least annually. Other amortizable intangible assets include, among other items, patents, unpatented and other developed technology and customer-based intangibles, and are amortized using the straight-line method over their respective estimated useful lives of 3 to 15 years. The Company reviews intangible assets for impairment if changes in circumstances or the occurrence of events suggest the remaining value is not recoverable.

Derivative Financial Instruments SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*, requires the Company to record derivatives as assets or liabilities on the balance sheet and to measure such instruments at fair value. Changes in fair value of derivatives are recorded each period in current results of operations or other comprehensive income, depending on whether the derivative is designated as part of a hedge transaction.

The Company periodically enters into forward foreign currency contracts to reduce exposures relating to rate changes in certain foreign currencies. Certain exposures to credit losses related to counterparty nonperformance exist. However, the Company does not anticipate nonperformance by the counterparties since they are large, well-established financial institutions. Except as described in the following paragraph, none of these derivatives is accounted for as a hedge transaction under the provisions of SFAS No. 133. Accordingly, changes in the fair value of forward foreign currency contracts are recorded as a component of net income. The fair values of the Company's derivative financial instruments are based on prices quoted by financial institutions for these instruments. The Company was a party to forward foreign currency contracts with notional amounts of $1.8 million and $33.6 million at December 31, 2008 and 2007, respectively.

On February 6, 2007, the Company entered into a 10-month Japanese yen-based cross-currency interest rate swap, with aggregate notional principal amounts of 2.4 billion Japanese yen and $20 million that matured on November 30, 2007. This swap effectively hedged a portion of the Company's net investment in its Japanese subsidiary. During the term of this transaction, the Company remitted to, and received from, its counterparty interest payments based on rates that were reset quarterly equal to three-month Japanese LIBOR and three-month U.S. LIBOR rates, respectively. The Company designated this hedging instrument as a hedge of a portion of the net investment in its Japanese subsidiary, and used the spot rate method of accounting to value changes of the hedging instrument attributable to currency rate fluctuations. As such, a $2.1 million adjustment in the fair market value of the hedging instrument related to changes in the spot rate was recorded as a charge to "Foreign currency translation" in shareholders' equity in 2007 to offset changes in a portion of the yen-denominated net investment in the Company's Japanese subsidiary and will remain there until the net investment is disposed. The Company recorded $0.7 million in net interest income in 2007 in connection with the cross-currency interest rate swap.

Foreign Currency Translation Assets and liabilities of foreign subsidiaries are translated from foreign currencies into U.S. dollars at period-end exchange rates, and the resulting gains and losses arising from translation of net assets located outside the U.S. are recorded as a cumulative translation adjustment, a component of accumulated other comprehensive income (loss) in the consolidated balance sheets. Income statement amounts are translated at the weighted average exchange rates for the year. Translation adjustments are not adjusted for income taxes as substantially all translation adjustments relate to permanent investments in non-U.S. subsidiaries. Gains and losses resulting from foreign currency transactions are included in other income, net in the consolidated statements of operations.

Revenue Recognition/Concentration of Risk Revenue and the related cost of sales are generally recognized upon shipment of the products. Revenue for product sales is recognized upon delivery, when persuasive evidence of an arrangement exists, when title and risk of loss have been transferred to the customer, collectibility is reasonably assured, and pricing is fixed or determinable.

The Company provides for estimated returns and warranty obligations when the revenue is recorded. The Company sells its products throughout the world primarily to companies in the microelectronics industry. The Company performs continuing credit evaluations of its customers and generally does not require collateral. Letters of credit may be required from its customers in certain circumstances. The Company maintains an allowance for doubtful accounts that management believes is adequate to cover losses on trade receivables.

The Company collects various sales and value-added taxes on certain product and service sales that are accounted for on a net basis.

Income Taxes Deferred income taxes are provided in amounts sufficient to give effect to temporary differences between financial and tax reporting. The Company accounts for tax credits as reductions of income tax expense. The Company utilizes the asset and liability method for computing its deferred income taxes. Under the asset and liability method, deferred tax assets and liabilities are based on the temporary difference between the financial statement and tax basis of assets and liabilities and the enacted tax rates expected to apply to taxable income in the years in which these temporary differences are expected to be recovered or settled. The effect on deferred tax

assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. The Company collects various sales and value-added taxes on certain product and service sales, which are accounted for on a net basis.

The Company has significant amounts of deferred tax assets. Management reviews its deferred tax assets for recoverability on a quarterly basis and assesses the need for valuation allowances. These deferred tax assets are evaluated jurisdictionally, by considering historical levels of income, estimates of future taxable income streams and the impact of tax planning strategies. A valuation allowance is recorded to reduce deferred tax assets when it is determined that it is more likely than not that the Company would not be able to realize all or part of its deferred tax assets based on all available evidence. At December 31, 2008, the Company recorded a $42.7 million valuation allowance against deferred tax assets which, in management's estimate, cannot be determined to be more likely than not to be realized. The Company carried no valuation allowance against its deferred tax assets at December 31, 2007.

Except as indicated in Note 16 as relates to 13.4 billion yen (approximately $122 million), the Company intends to continue to reinvest its remaining undistributed international earnings in its international operations indefinitely; therefore, no U.S. tax expense has been recorded to cover the repatriation of such undistributed earnings.

The Company's policy for recording interest and penalties associated with audits and unrecognized tax benefits is to record such items as a component of income before taxes. Penalties are recorded in other expense and interest paid or received is recorded in interest expense or interest income, respectively, in the statement of operations.

Comprehensive Income (Loss) Comprehensive income (loss) represents the change in shareholders' equity resulting from items other than shareholder investments and distributions. The Company's foreign currency translation adjustments, unrealized gains and losses on marketable securities and minimum pension liability adjustments are included in accumulated other comprehensive income (loss). Comprehensive income (loss) and the components of accumulated other comprehensive income (loss) are presented in the accompanying consolidated statements of shareholders' equity and comprehensive income (loss).

Recent Accounting Pronouncements In December 2007, the Financial Accounting Standard Board (FASB) issued SFAS No. 141 (revised 2007) *Business Combinations* (SFAS No. 141(R)). SFAS No. 141(R) retains the fundamental requirements of the original pronouncement requiring that the purchase method be used for all business combinations. SFAS No. 141(R) defines the acquirer as the entity that obtains control of one or more businesses in the business combination, establishes the acquisition date as the date that the acquirer achieves control, and requires the acquirer to recognize the assets acquired, liabilities assumed and any noncontrolling interest at their fair values as of the acquisition date. SFAS No. 141(R) also requires that acquisition-related costs be recognized separately from the acquisition. SFAS No. 141(R) is effective for the Company January 1, 2009. The Company is currently assessing the impact of SFAS No. 141(R) on its consolidated financial statements.

In December 2007, the FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements (*SFAS No. 160*)*. SFAS No. 160 clarifies that a noncontrolling interest in a subsidiary should be reported as equity in the consolidated financial statements. Consolidated net income should include the net income for both the parent and the noncontrolling interest, with disclosure of both amounts on the consolidated statement of income. The calculation of earnings per share will continue to be based on income amounts attributable to the parent. SFAS No. 160 is effective for the Company January 1, 2009. The Company is currently assessing the impact of SFAS No. 160 on its consolidated financial statements.

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities* (SFAS 161). SFAS 161 amends and expands the disclosure requirements of SFAS 133, *Accounting for Derivative Instruments and Hedging Activities* (SFAS 133). It requires qualitative disclosures about objectives and strategies for using derivatives, quantitative disclosures about fair value amounts of gains and losses on

derivative instruments, and disclosures about credit-risk-related contingent features in derivative agreements. SFAS No. 161 is effective for the Company January 1, 2009. The Company is currently assessing the impact of SFAS No. 161 on its consolidated financial statements.

In April 2008, the FASB issued FASB Staff Position (FSP) 142-3, *Determination of the Useful Life of Intangible Assets*, (FSP 142-3). FSP 142-3 amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under SFAS No. 142, *Goodwill and Other Intangible Assets*. FSP 142-3 is effective for the Company January 1, 2009. The Company is currently assessing the impact of FSP 142-3 on its consolidated financial statements.

In May 2008, the FASB issued SFAS No. 162, *The Hierarchy of Generally Accepted Accounting Principles* (SFAS 162). SFAS 162 identifies the sources of accounting principles and the framework for selecting the principles used in the preparation of financial statements. SFAS 162 was effective November 15, 2008 following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, *The Meaning of Present Fairly in Conformity with Generally Accepted Accounting Principles*. The implementation of this standard did not have a material impact on the Company's consolidated financial statements.

In June 2008, the FASB issued FSP Emerging Issues Task Force (EITF) 03-6-1, *Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities* (FSP EITF 03-6-1). FSP EITF 03-6-1 clarified that all outstanding unvested share-based payment awards that contain rights to nonforfeitable dividends participate in undistributed earnings with common shareholders. Awards of this nature are considered participating securities and the two-class method of computing basic and diluted earnings per share must be applied. FSP EITF 03-6-1 is effective for the Company January 1, 2009. The application of FSP EITF 03-6-1 will not have a material impact on the Company's consolidated financial statements.

In June 2008, the FASB ratified EITF Issue No. 07-5, *Determining Whether an Instrument (or an Embedded Feature) Is Indexed to an Entity's Own Stock* (EITF 07-5). EITF 07-5 provides that an entity should use a two-step approach to evaluate whether an equity-linked financial instrument (or embedded feature) is indexed to its own stock, including evaluating the instrument's contingent exercise and settlement provisions. It also clarifies the impact of foreign currency denominated strike prices and market-based employee stock option valuation instruments on the evaluation. EITF 07-5 is effective for the Company January 1, 2009. The application of EITF Issue No. 07-5 will not have a material impact on the Company's consolidated financial statements.

In June 2008, the FASB ratified EITF Issue No. 08-3, *Accounting for Lessees for Maintenance Deposits Under Lease Arrangements* (EITF 08-3). EITF 08-3 provides guidance for accounting for nonrefundable maintenance deposits. It also provides revenue recognition accounting guidance for the lessor. EITF 08-3 is effective for the Company January 1, 2009. The application of EITF Issue No. 08-3 will not have a material impact on the Company's consolidated financial statements.

(2) IMPAIRMENT OF GOODWILL

In accordance with Statement of Financial Accounting Standards ("SFAS") No. 142, *Goodwill and Other Intangible Assets*, the Company tested for impairment of its goodwill in connection with its annual impairment test of goodwill as of August 31, 2008, and due to events and changes in circumstances through the end of the third and fourth quarters of the year ended December 31, 2008, the Company had additional triggering events that indicated impairments had occurred. In addition, the Company tested for impairment of its long-lived assets (principally property, plant and equipment and intangibles) in accordance with SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets.*

The factors deemed by management to have collectively constituted impairment triggering events included a significant decrease in the Company's market capitalization as of its annual impairment date and as of December 31, 2008, which was significantly below the recorded value of its consolidated net assets, and a significant decline in the current and forecasted business levels. As a result of the impairment assessments, the

Company recorded goodwill impairment charges of $379.8 million and $94.0 million in the third and fourth quarters, respectively, of the year ended December 31, 2008.

Goodwill

The Company assesses goodwill for impairment annually as of August 31, and when an event occurs or circumstances change that would indicate that the asset might be impaired. Goodwill is tested for impairment using a two-step process. In the first step, the fair value of the reporting unit is compared to its carrying value. For purposes of assessing impairment under SFAS No. 142, the Company is a single reporting unit. If the fair value of the reporting unit exceeds the carrying value of its net assets, goodwill is considered not impaired, and no further testing is required. If the carrying value of the net assets exceeds the fair value of the reporting unit, a second step of the impairment assessment is performed in order to determine the implied fair value of a reporting unit's goodwill. Determining the implied fair value of goodwill requires a valuation of the reporting unit's tangible and intangible assets and liabilities in a manner similar to the allocation of purchase price in a business combination. If the carrying value of the reporting unit's goodwill exceeds the implied fair value of its goodwill, goodwill is deemed impaired and is written down to the extent of the difference.

Throughout fiscal 2008, the Company experienced a sustained and significant decline in its stock price. As a result of the decline in stock price and a significant decline in the current and forecasted business level, the Company's market capitalization fell significantly below the recorded value of its consolidated net assets.

Based on the results of the Company's initial assessment of impairment of its goodwill (step 1), it was determined that the consolidated carrying value of the Company exceeded its estimated fair value. Therefore, the Company performed a second step of the impairment assessment to determine the implied fair value of goodwill. In performing the goodwill assessment, the Company used current market capitalization, discounted cash flows and other factors as the best evidence of fair value. There are inherent uncertainties and management judgment required in an analysis of goodwill impairment. The Company performed the assessment of impairment of its goodwill twice during the year, once during the third quarter, resulting in write-off of $379.8 million, and during the fourth quarter, resulting in the write-off of the Company's remaining goodwill of $94.0 million.

Long-Lived Assets

In accordance with SFAS No. 144, the Company reviews its long-lived assets whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. If the carrying amount of an asset or group of assets exceeds its fair value, the asset will be written down to its fair value. In connection with the triggering events discussed above, during the third and fourth quarters of fiscal year 2008 the Company reviewed its long-lived assets and determined that none of its long-lived assets were impaired for its asset groups. The determination was based on reviewing estimated undiscounted cash flows for the Company's asset groups, which were greater than their carrying values. As required under U.S. generally accepted accounting principles, the SFAS No. 144 impairment analysis occurred before the SFAS No. 142 goodwill impairment assessment.

The evaluation of the recoverability of long-lived assets requires the Company to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to, the identification of the asset group at the lowest level of independent cash flows and the primary asset of the group; and long-range forecasts of revenue, reflecting management's assessment of general economic and industry conditions, operating income, depreciation and amortization and working capital requirements.

Due to the inherent uncertainty involved in making these estimates, particularly in the current economic environment and plan for a recovery, actual results could differ from those estimates. In addition, changes in the underlying assumptions would have a significant impact on the conclusion that an asset group's carrying value is recoverable, or the determination of any impairment charge if it was determined that the asset values were indeed impaired.

Due to the decline in the Company's market capitalization and the uncertain economic environment within the semiconductor industry, the Company will continue to monitor circumstances and events in future periods to

determine whether additional asset impairment testing is warranted. It is not unlikely that in the future the Company may no longer be able to conclude that there is no impairment of its long-lived assets, nor can the Company provide assurance that material impairment charges of long-lived assets will not occur in future periods.

(3) ACQUISITIONS AND DIVESTITURES

On August 11, 2008, Entegris acquired Poco Graphite, Inc (POCO). Based in Decatur, Texas, POCO is a leading provider of process-critical, graphite-based consumables and finished products used in a variety of markets, including semiconductor, EDM (electrical discharge machining), medical, opto-electronic, aerospace and specialty industrial. The intent of the acquisition was to extend the Company's position in the semiconductor market and to add new complementary growth opportunities in other high-performance industries.

The Company paid cash consideration of $162.9 million for POCO, including transaction costs of $1.3 million. The transaction is subject to extensive escrow fund arrangements, portions of which remain in place to various dates through August 2013, totaling $24.0 million to secure certain environmental and export compliance obligations of the POCO sellers. This acquisition was accounted for under the purchase method of accounting. The Company's consolidated financial statements for the year ended December 31, 2008 include the net assets, recorded at their fair value, and results of operations of POCO from August 11, 2008, the date of acquisition. Pro forma results are not presented since this acquisition did not constitute a material business combination.

Allocation of Purchase Price

The purchase price for POCO has been preliminarily allocated based on the fair values of assets acquired and liabilities assumed. The final valuation of net assets is expected to be completed as soon as possible, but no later than one year from the acquisition date. Given the size and complexity of the acquisition, the fair valuation of certain net assets and liabilities is still being finalized. The following table presents the preliminary allocation of purchase price.

(In thousands)	
Book value of tangible net assets acquired	$ 55,354
Remaining allocation:	
Increase inventories to fair value[(a)]	16,989
Increase property, plant and equipment to fair value[(b)]	10,546
Record identifiable intangible assets[(c)]	36,400
Decrease other net assets to fair value	(754)
Adjustments to tax-related assets and liabilities[(d)]	(21,576)
Goodwill[(e)]	65,893
Purchase price	$162,852

The following table summarizes the allocation of the POCO purchase price to the fair values of the assets acquired and liabilities assumed:

(In thousands)	
Accounts receivable, inventories and other assets	$ 58,456
Property, plant and equipment	35,786
Intangible assets	36,400
Goodwill	65,893
Total assets acquired	196,535
Current liabilities	(6,839)
Deferred tax liabilities	(26,844)
Total liabilities assumed	(33,683)
Net assets acquired	$162,852

(a) The fair value of acquired inventories was determined as follows:

- Finished goods—the estimated selling price less the cost of disposal and reasonable profit for the selling effort.
- Work in process—the estimated selling price of finished goods less the cost to complete, cost of disposal and reasonable profit on the selling and remaining manufacturing efforts.
- Raw materials—estimated current replacement cost, which equaled POCO's historical cost.

The increase in inventories to record the fair values of finished goods and work in process was as follows:

(In thousands)	
Finished goods	$ 5,847
Work in process	11,142
Total	$16,989

(b) The fair value of acquired property, plant and equipment was valued at its value-in-use.

(c) The Company worked with independent valuation specialists to determine the fair value of identifiable intangible assets, which were as follows:

(In thousands)	Fair value	Useful life in years	Weighted average life in years
Developed technology	$18,500	10	10
Trade names	6,500	15	15
Customer relationships	11,300	15	15
Noncompete covenant	100	2	2
Total	$36,400		

The total weighted average life of identifiable intangible assets acquired from POCO that are subject to amortization is 12.4 years.

Developed technology represents the technical processes, intellectual property, and institutional understanding that were acquired with the POCO acquisition with respect to products, compounds and/or processes for which development had been completed.

The fair value of identifiable intangible assets was determined using the "income approach." This method starts with a forecast of expected future net cash flows. These net cash flow projections do not anticipate any revenue or cost synergies. These cash flows are then adjusted to present value by applying an appropriate discount rate that reflects the risk factors associated with the cash flow streams, some of which are more certain than others.

The valuations were based on the information that was available as of the acquisition date and the expectations and assumptions that have been deemed reasonable by the Company's management. No assurance can be given, however, that the underlying assumptions or events associated with such assets will occur as projected. For these reasons, among others, the actual results may vary from the projected results.

(d) Gives the effect of the estimated tax effects of the acquisition.

(e) In accordance with the requirements of SFAS No. 142, *Goodwill and Other Intangible Assets* (SFAS No.142), the goodwill associated with the merger will not be amortized. None of the goodwill is deductible for tax purposes. The goodwill was analyzed for impairment and written off in 2008. See Note 2 to the consolidated financial statements.

Acquisition of Specialty Coatings business

On August 16, 2007, the Company acquired the specialty coatings business of a privately held company located in Burlington, Massachusetts. This specialty coatings business develops and applies proprietary low-temperature, high-purity coatings to critical wafer handling components used in ion implant operations as well as to other critical components used in semiconductor manufacturing and other applications.

The purchase price was $44.9 million in cash, including transaction costs of $0.2 million and contingent consideration of $3.1 million paid to the seller as certain financial metrics related to calendar 2007 results were met. This acquisition was accounted for under the purchase method of accounting and the results of operations of this specialty coatings business are included in the Company's consolidated financial statements since August 16, 2007. Pro forma results are not presented as this acquisition did not constitute a material business combination.

The above purchase price has been allocated to the fair values of assets acquired and liabilities assumed as summarized in the table below.

(In thousands)	
Inventory	$ 1,478
Equipment	600
Other intangible assets	26,500
Goodwill	16,633
Total assets acquired	$45,211
Current liabilities	(300)
Net assets acquired	$44,911

The amount allocated to acquired inventories above replacement cost was $0.8 million. Accordingly, the results of operations for the year ended December 31, 2007 include an incremental charge of $0.8 million in cost of sales.

The $26.5 million of other intangible assets included $16.1 million of customer relationships (12-year economic consumption life), $10.0 million of developed technologies (12-year economic consumption life), and $0.4 million of employment and non-competition agreements (2.4-year average economic consumption life). These intangible assets were valued at fair value as determined by the Company with the assistance of an independent valuation specialist.

The goodwill recorded in connection with the acquisition will not be amortized, but is deductible for tax purposes. The goodwill was analyzed for impairment and written off in 2008. See Note 2 to the consolidated financial statements.

Divestitures and Discontinued Operations

In June 2007, the Company announced its intent to divest its cleaning equipment business. The cleaning equipment business sold precision cleaning systems to semiconductor and hard disk drive customers for use in their manufacturing operations. In conjunction with the establishment of management's plan to sell the cleaning equipment business, the fair value of the assets of that business was tested for impairment and, where applicable, adjusted to fair value less costs to sell. The Company sold the operating assets of the cleaning equipment business in April 2008 for proceeds of $0.7 million, essentially equal to the carrying value of the assets sold.

On September 12, 2005, the Company announced that it would divest its gas delivery, life science and tape and reel product lines. The gas delivery products included mass flow controllers, pressure controllers and vacuum gauges that are used by customers in manufacturing operations to measure and control process gas flow rates and

to control and monitor pressure and vacuum levels during the semiconductor manufacturing process. The life sciences products included stainless steel clean in place systems for life sciences applications. Tape and reel products included the Stream™ product line, which is a packaging system designed to protect and transport microelectronic components, while enabling the high-speed automated placement of the components onto printed circuit boards used for electronics.

The assets and liabilities of the life sciences product line and the assets of the tape and reel product line were sold in December 2005 for net proceeds of $0.8 million and $1.0 million, respectively. The Company closed the sale of the gas delivery assets in February 2006. After adjustments for severance, sublease payments and other closing costs, the net proceeds of the sale totaled $13.1 million. As part of the purchase accounting allocation of the acquisition of Mykrolis, the fair values of the assets of the gas delivery product line were classified as assets held for sale as of the date of the August 6, 2005 acquisition. Accordingly, the Company adjusted its purchase price allocation related to the assets of the gas delivery product line and did not recognize a gain or loss from the sale.

The consolidated financial statements have been reclassified to segregate as discontinued operations the assets and liabilities, and operating results of, the product lines divested for all periods presented. The summary of operating results from discontinued operations for the years ended December 31, 2008, 2007 and 2006 is as follows:

(In thousands)	2008	2007	2006
Net sales	$ 4,460	$ 4,891	$ 9,227
Loss from discontinued operations, before income taxes	$(1,040)	$(3,996)	$(1,906)
Income tax (expense) benefit	(65)	1,999	2,221
(Loss) income from discontinued operations, net of taxes	$(1,105)	$(1,997)	$ 315

Net liabilities of discontinued operations at December 31, 2007 consisted of the following:

(In thousands)	2007
Accounts receivable	$ 276
Inventory	3,029
Assets held for sale	882
Total assets of discontinued operations	4,187
Total liabilities associated with discontinued operations	4,225
Net liabilities of discontinued operations	$ (38)

No interest expense was allocated to the operating results of discontinued operations. The after-tax earnings of discontinued operations in the year ended December 31, 2006 included a tax benefit of $1.6 million associated with a decrease in the Company's deferred tax asset valuation allowance resulting from the resolution of a matter with respect to the characterization of certain gains and losses.

Assets of discontinued operations and other assets held for sale shown in the consolidated balance sheet as of December 31, 2008 include a building located in Gilroy, California unrelated to the cleaning equipment business held for sale and carried at $2.5 million. Assets of discontinued operations and other assets held for sale shown in the consolidated balance sheet as of December 31, 2007 include the net assets of the cleaning equipment business carried at $4.2 million.

(4) ACCOUNTS RECEIVABLE

Accounts receivable and notes receivable from customers at December 31, 2008 and 2007 consist of the following:

(In thousands)	2008	2007
Accounts receivable	$59,326	$ 99,236
Notes receivable	12,521	13,316
	71,847	112,552
Less allowance for doubtful accounts	1,312	499
	$70,535	$112,053

(5) INVENTORIES

Inventories at December 31, 2008 and 2007 consist of the following:

(In thousands)	2008	2007
Raw materials	$ 24,922	$21,237
Work-in-process	16,498	3,496
Finished goods[(a)]	59,954	47,455
Supplies	815	932
	$102,189	$73,120

(a) Includes consignment inventories held by customers for $4,465 and $6,428 at December 31, 2008 and 2007 respectively.

(6) PROPERTY, PLANT AND EQUIPMENT

Property, plant, and equipment at December 31, 2008 and 2007 consist of the following:

(In thousands)	2008	2007	Estimated useful lives in years
Land	$ 12,560	$ 10,826	
Buildings and improvements	78,960	72,001	5-35
Manufacturing equipment	138,505	100,319	5-10
Molds	81,593	85,669	3-5
Office furniture and equipment	56,101	63,611	3-8
	367,719	332,426	
Less accumulated depreciation	207,981	211,269	
	$159,738	$121,157	

Depreciation expense for the years ended December 31, 2008, 2007, and 2006, was $26.8 million, $24.9 million, and $25.3 million, respectively. The Company recorded asset impairment write-offs on molds and equipment due to abandonment of approximately $1.4 million, $4.1 million, and $1.5 million for the fiscal years ended December 31, 2008, 2007 and 2006, respectively. All impairment losses are included in cost of sales.

(7) INVESTMENTS

At December 31, 2008 and 2007, the Company held equity investments totaling $14.0 million and $13.9 million, respectively. These investments all represent interests in privately held companies. Investments representing $10.3 million of the total at December 31, 2008 are accounted for under the equity method of accounting, with the remaining $3.7 million accounted for under the cost method.

During 2008, the Company invested $11.0 million in equity investments. Also in 2008, the Company determined that four of its investments were partially or totally impaired. The Company recorded impairment losses of $11.1 million that were classified as other expense. During 2007, the Company recorded other income of $6.1 million on the sale of the Company's interest in a privately held equity investment with a carrying value of $0.5 million accounted for using the cost method. Proceeds from the sale totaled $6.6 million.

(8) INTANGIBLE ASSETS

As of December 31, 2008, the Company recognized no goodwill on its consolidated balance sheet. The reduction from $402.1 million balance reflected at December 31, 2007 mainly reflects the $473.8 million impairment charge recorded during the year (See Note 2 for further discussion). The impairment charge and other changes to goodwill are reflected in the table below.

The changes in the carrying amount of goodwill for the years ended December 31, 2008 and 2007 are as follows:

(In thousands)	2008	2007
Beginning of period	$ 402,125	$394,531
Acquisition of specialty coatings business	—	16,633
Acquisition of POCO Graphite, Inc.	65,893	—
Adjustments to Mykrolis purchase price allocation	(822)	(6,981)
Adjustments to specialty coatings acquisition purchase price allocation	59	—
Impairment of goodwill associated with assets held for sale	—	(408)
Other, including foreign currency translation	6,544	(1,650)
Impairment charge	(473,799)	—
End of year	$ —	$402,125

As of December 31, 2008, goodwill amounted to zero, a decrease of $402.1 million from the balance at December 31, 2007. The decrease mainly reflects the $473.8 million impairment charge as discussed above.

Other intangible assets, excluding goodwill, at December 31, 2008 and 2007 consist of the following:

	2008			
(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value	Weighted average life in years
Patents	$ 17,855	$15,218	$ 2,637	9.1
Developed technology	74,988	36,742	38,246	7.5
Trademarks and trade names	15,500	6,872	8,628	9.1
Customer relationships	55,400	12,595	42,805	11.1
Employment and noncompete agreements	3,507	3,215	292	4.6
Other	4,157	3,626	531	5.6
	$171,407	$78,268	$93,139	8.9

	2007			
(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value	Weighted average life in years
Patents	$ 17,855	$13,323	$ 4,532	9.1
Developed technology	56,488	26,203	30,285	6.6
Trademarks and trade names	9,000	5,513	3,487	4.9
Customer relationships	44,100	7,888	36,212	10.2
Employment and noncompete agreements	3,407	2,893	514	4.7
Other	4,203	2,863	1,340	5.6
	$135,053	$58,683	$76,370	7.9

Amortization expense was $19.6 million, $18.9 million, $17.6 million in the fiscal years ended December 31, 2008, 2007 and 2006, respectively.

Estimated amortization expense for the fiscal years 2009 to 2013, and thereafter, is $19.0 million, $12.9 million, $9.6 million, $9.0 million, $8.4 million, and $34.3 million, respectively.

(9) ACCRUED LIABILITIES

Accrued liabilities at December 31, 2008 and 2007 consist of the following:

(In thousands)	2008	2007
Payroll and related benefits	$19,601	$29,915
Employee benefits	1,868	4,664
Taxes, other than income taxes	823	3,135
Royalties	1	1,568
Interest	1,734	1,692
Warranty and related	1,112	1,306
Other	11,832	15,377
	$36,971	$57,657

(10) WARRANTY

The Company accrues for warranty costs based on historical trends and the expected material and labor costs to provide warranty services. The majority of products sold are generally covered by a warranty for periods ranging from 30 days to one year. The following table summarizes the activity related to the product warranty liability during the fiscal years ended December 31, 2008, 2007 and 2006:

(In thousands)	2008	2007	2006
Beginning of year	$ 1,306	$ 1,824	$ 1,795
Accrual for warranties issued during the period	2,221	1,742	2,042
Adjustment of previously recorded accruals	(878)	(1,170)	(21)
Settlements during the year	(1,537)	(1,090)	(1,992)
End of year	$ 1,112	$ 1,306	$ 1,824

(11) FINANCING ARRANGEMENTS

Short-term borrowings at December 31, 2008 and 2007 consist of the following:

(In thousands)	2008	2007
Bank borrowings, denominated in Japanese yen with an average interest rate of 1.28%	$—	$17,802
Total short-term borrowings	$—	$17,802

Long-term debt at December 31, 2008 and 2007 consists of the following:

(In thousands)	2008	2007
Revolving credit agreement with interest of LIBOR rate plus a LIBOR margin ranging from 1% to 1.5% through 2013	$139,000	$ —
Bank loan denominated in Japanese yen with interest of 1.43% through 2010	22,128	26,702
Stock redemption notes payable with interest of 8% through December 2010	835	1,223
Small Business Administration loans with interest ranging from 5.5% to 7.35% and various maturities through July 2010	1,719	1,758
Total long-term debt	163,682	29,683
Less current maturities of long-term debt	13,166	9,310
Long-term debt less current maturities	$150,516	$20,373

Annual maturities of long-term debt as of December 31, 2008, are as follows:

Fiscal year ending	*(In thousands)*
2009	$ 13,166
2010	11,516
2011	—
2012	—
2013	139,000
Thereafter	—
	$163,682

On February 15, 2008, the Company entered into a credit agreement with Wells Fargo Bank National Association, as agent, and certain other banks. The agreement provided for a $230 million revolving credit facility (the Facility) for a period of five years with an uncommitted option to expand the Facility by up to $20 million provided that no default or event of default has occurred or is continuing at such time. The Facility replaced the Company's credit agreement executed in 2007 between the Company and Wells Fargo Bank National Association, as agent, and certain other banks. Under the Facility, the Company generally may elect that the loans comprising each borrowing bear interest at a rate per annum equal to (a) the Base Rate equal to the higher of the Prime Rate then in effect and the Federal Funds Rate then in effect, plus 0.50% or (b) a LIBOR rate plus a LIBOR Margin ranging from 1.00% to 1.50% depending on leverage. The Company borrowed $168.0 million under the Facility during the year ended December 31, 2008 with $139.0 million outstanding at the end of the period.

The Facility is guaranteed by the Company's material direct and indirect subsidiaries that are treated as domestic for tax purposes. In addition, the Company is obligated to pledge 65% of the stock of each material subsidiary which is treated as foreign for tax purposes and owned by a domestic entity. The Facility requires that the Company comply on a quarterly basis with certain financial covenants, including leverage and interest coverage ratio covenants. In addition, the Facility includes negative covenants, subject to exceptions, restricting or limiting the Company's ability and the ability of its subsidiaries to, among other things, sell assets, engage in mergers, acquisitions and other business combinations, declare dividends or redeem or repurchase capital stock. The Facility also contains customary representations, warranties, covenants and events of default.

As described in Note 23, the Company executed a new domestic credit agreement in February 2009, which expires in November 2011, with initial and maximum borrowing capacities of $139 million and $150 million, respectively.

A global credit market crisis has created a very difficult business environment. These conditions have generally worsened since October 2008. The Company's operating performance, as well as its liquidity position, has been and continues to be negatively affected by these economic conditions, many of which are beyond its control. The

Company does not believe it is likely that these adverse economic conditions, and their effect on the semiconductor industry, will improve significantly in the near term. However, the effect of current global economic environment on the semiconductor industry requires that the Company maintain its near-term liquidity support.

The amended credit facility requires that the Company meet various financial covenants. If the Company's future financial performance fails to meet these financial covenants, then its lenders may take control of the Company's cash receipts from the collection of its receivables as well as certain other assets. In this event, the Company's ability to conduct business could be severely impeded as there can be no assurance that funds adequate in amounts and timing will be available to meet the Company's liquidity requirements.

The Company plans to manage its business during this time through a series of operating measures designed to reduce expenditures and to generate incremental cash flow through asset management initiatives. If the economic environment does not improve in 2009, the Company's planned and initiated actions may not be sufficient and could lead to possibly failing the financial debt covenants required under the amended credit facility.

During the fourth quarter of 2007, the Company executed a 3.0 billion yen ($26.7 million) unsecured term note agreement with a Japanese bank. Under the note agreement, the Company will make semi-annual payments in May and November each year of 500 million yen ($4.7 million) through November 2010, along with interest at a rate of 1.43%. Borrowings outstanding under this agreement at December 31, 2008 and December 31, 2007 were $22.1 million and $26.7 million, respectively.

The Company has entered into unsecured line of credit agreements, which expire at various dates, with three international commercial banks, which provide for aggregate borrowings of 10.5 million Malaysia ringgits and 1.5 billion Japanese yen for its foreign subsidiaries, which is equivalent to $19.6 million as of December 31, 2008. Interest rates for these facilities are based on a factor of the banks' reference rates. Borrowings outstanding under international line of credit agreements at December 31, 2008 and December 31, 2007, were none and $17.8 million, respectively.

(12) LEASE COMMITMENTS

As of December 31, 2008, the Company was obligated under noncancellable operating lease agreements for certain sales offices and manufacturing facilities, manufacturing equipment, vehicles, information technology equipment and warehouse space. Future minimum lease payments for noncancellable operating leases with initial or remaining terms in excess of one year are as follows:

Fiscal year ending December 31	*(In thousands)*
2009	$ 8,574
2010	6,522
2011	3,380
2012	3,001
2013	2,752
Thereafter	2,062
Total minimum lease payments	$26,291

Total rental expense for all equipment and building operating leases for the fiscal years ended December 31, 2008, 2007, and 2006, were $12.3 million, $14.0 million, $13.7 million, respectively.

(13) RESTRUCTURING COSTS

For the years ended December 31, 2008, 2007, and 2006, the accrued liabilities, provisions and payments associated with the employee severance and retention costs of the Company's restructuring activities were as follows:

(In thousands)	2008	2007	2006
Accrued liabilities at beginning of period	$ 6,209	$ 6,497	$ 568
Provision	16,552	7,980	10,224
Payments	(9,271)	(8,268)	(4,295)
Accrued liabilities at end of period	$13,490	$ 6,209	$ 6,497

Global restructuring initiatives

In order to adjust the Company's operations to changing business conditions in March 2008, the Company terminated approximately 75 employees. In connection with these reductions, the Company recorded severance charges of $4.8 million in the year ended December 31, 2008 related to employee severance and retention costs (generally over the employees' required remaining term of service) that are primarily classified as selling, general and administrative expenses.

In the third quarter of 2008, the Company announced the appointment of a new Chief Operating Officer. In conjunction with this change in executive management, the Company initiated a global business restructuring of its sales and marketing function, manufacturing operations, and realignment of the global supply chain and other ancillary operational functions. Related to these cost reduction initiatives, the Company announced on November 4, 2008 that it will close the larger of its two manufacturing facilities in Chaska, Minnesota and will transfer production to its other existing facilities. The closure, which will impact approximately 200 jobs or approximately 7% of the Company's worldwide workforce, is expected to be completed in 2009. Associated with these changes, the Company recorded $10.4 million in the year ended December 31, 2008 related to employee severance and retention costs (generally over the employees' required remaining term of service) that are classified as restructuring charges. In addition, other costs of $0.2 million related to accelerated depreciation expense classified in cost of sales was recorded for the year ended December 31, 2008. As part of the business restructuring, the Company intends to take further steps to reduce its operating expenses through 2009.

Gilroy Cleaning Service Facility

In November 2007, the Company announced that it would close its cleaning service facility in Gilroy, California and relocate certain equipment to other existing manufacturing plants located in Asia, Europe, and the United States. In connection with this action, the Company recorded charges of $0.1 million and $3.8 million for the years ended December 31, 2008 and 2007, respectively, for employee severance and retention costs (generally over the employees' required remaining term of service) and asset impairment and accelerated depreciation expense.

Severance and retention costs, mainly classified as selling, general and administrative expense, totaled $0.1 million and $0.7 million for years ended December 31, 2008 and 2007, respectively. Other costs of $45,000 and $3.1 million related to fixed asset write-offs, classified in cost of sales, were also recorded for years ended December 31, 2008 and 2007, respectively.

The Company's facility in Gilroy became available for sale during the first quarter ended March 29, 2008 and was classified in assets held for sale at December 31, 2008 at a carrying value of $2.5 million.

Bad Rappenau Facility

In November 2005, the Company announced that during 2006 it would close its manufacturing plant located in Bad Rappenau, Germany and relocate the production of products made in that facility to other existing

manufacturing plants located in the United States and Asia. In addition, the Company moved its Bad Rappenau administrative center to Dresden, Germany. In connection with these actions, the Company incurred charges of $7.5 million for employee severance and retention costs (generally over the employees' required remaining term of service) and asset impairment and accelerated depreciation.

Severance and retention costs, mainly classified as selling, general and administrative expense, totaled $(0.2) million and $4.4 million for the years ended December 31, 2007 and 2006, respectively. Other costs of $0.4 million and $1.2 million, related to fixed asset write-offs and accelerated depreciation classified in cost of sales, were also recorded for the years ended December 31, 2007 and 2006, respectively.

The Company's facility in Bad Rappenau became available for sale during the third quarter of 2006 and was classified in assets held for sale as of December 31, 2006 at a carrying value of $2.2 million. During the second quarter of 2007, the Company sold the facility for $1.9 million.

(14) INTEREST (EXPENSE) INCOME, NET

Interest income, net for the years ended December 31, 2008, 2007 and 2006 consists of the following:

(In thousands)	2008	2007	2006
Interest income	$ 1,796	$ 7,815	$9,668
Interest expense	(2,814)	(2,570)	(463)
Interest (expense) income, net	$(1,018)	$ 5,245	$9,205

(15) OTHER INCOME (EXPENSE), NET

Other income (expense), net for the years ended December 31, 2008, 2007 and 2006 consists of the following:

(In thousands)	2008	2007	2006
(Loss) gain on foreign currency remeasurement	$ (4,442)	$1,196	$ 794
Gain on sale of equity investments	—	6,068	—
Impairment loss on equity investments	(11,102)	—	—
Other, net	58	392	864
Other (expense) income, net	$(15,486)	$7,656	$1,658

(16) INCOME TAXES

(Loss) income before income taxes for the years ended December 31, 2008, 2007 and 2006 was derived from the following sources:

(In thousands)	2008	2007	2006
Domestic	(511,412)	$ 2,563	$46,864
Foreign	14,999	54,056	42,692
(Loss) income before income taxes	(496,413)	$56,619	$89,556

Income tax expense for the years ended December 31, 2008, 2007 and 2006 is summarized as follows:

(In thousands)	2008	2007	2006
Current:			
Federal	$ (104)	6,612	$ 923
State	(608)	3,122	1,115
Foreign	4,263	21,056	13,474
	3,551	30,790	15,512
Deferred (net of valuation allowance):			
Federal	11,124	(18,974)	13,038
State	(1,879)	(72)	610
Foreign	6,405	(1,388)	(2,224)
	15,650	(20,434)	11,424
Income tax expense	$19,201	$ 10,356	$26,936

Income tax (benefit) expense differs from the expected amounts based upon the statutory federal tax rates for the years ended December 31, 2008, 2007, and 2006 as follows:

(In thousands)	2008	2007	2006
Expected federal income tax at statutory rate	(173,746)	19,817	$31,344
State income taxes before valuation allowance, net of federal tax effect	(3,128)	1,983	1,131
Effect of foreign source income	1,416	(2,637)	(4,671)
Goodwill impairment	147,811	—	—
Tax effect of foreign dividend	3,594	(11,175)	—
Valuation allowance	42,093	—	—
Other items, net	1,161	2,368	(868)
Income tax expense (benefit)	$ 19,201	$ 10,356	$26,936

During 2008, the Company recorded a $42.7 million valuation allowance against its deferred tax assets, of which $0.6 million is related to discontinued operations. The Company carried no valuation allowance against these deferred tax assets at December 31, 2007. The unrecognized deferred tax assets relate primarily to net operating loss carryovers, general business credit carryovers, and tax credits carryforwards.

Generally, the provisions of SFAS No. 109, *Accounting for Income Taxes* require deferred tax assets to be reduced by a valuation allowance if, based on the weight of available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. SFAS No. 109 requires an assessment of all available evidence, both positive and negative, to determine the amount of any required valuation allowance.

As a result of the recent general economic and industry declines, and their impact on the Company's future outlook, management has reviewed its deferred tax assets and concluded that the uncertainties related to the realization of its assets have become unfavorable. As of December 31, 2008 the Company has a U.S. net deferred tax asset position of $42.3 million which is composed of temporary differences and various credit carryforwards. Management has considered the positive and negative evidence for the potential utilization of the net deferred tax asset based upon an application of the principles of SFAS No. 109 and related accounting pronouncements. Management has concluded that it is not more likely than not that the Company will realize the net deferred tax asset and thus is required to provide an allowance for a portion of the net deferred tax assets management has concluded will not be utilized. As a result, the Company recorded a deferred tax asset valuation allowance of $42.1 million against U.S. deferred tax assets, which is included in income tax expense from continuing and discontinued operations for 2008.

As of December 31, 2008 the Company had a net non-U.S. deferred tax asset position of $12.5 million before valuation allowance. During the fourth quarter of fiscal year 2008, management determined that based upon the

available evidence, a valuation allowance was required against non-U.S. deferred tax assets in certain jurisdictions. The establishment of a valuation allowance of approximately $0.6 million was recorded as an increase to income tax expense. For other non-U.S. jurisdictions, management believes that it is more likely than not that the net deferred tax assets will be realized.

As a result of commitments made by the Company related to investments in tangible property and equipment (approximately $43 million by December 31, 2010), the establishment of a research and development center in 2006 and certain employment commitments through 2010, income from certain manufacturing activities in Malaysia is exempt from tax for years up through 2015. The income tax benefits attributable to the tax status of this subsidiary are estimated to be none, $2.1 million (2 cents per diluted share) and $2.8 million (2 cents per diluted share for the years ended December 31, 2008, 2007 and 2006, respectively.

$0.2 million and $2.8 million was added to additional paid-in capital in accordance with SFAS No. 123(R) reflecting tax differences relating to employee stock option and restricted stock award transactions for the years ended December 31, 2007 and 2006, respectively. $2.5 million was charged to additional paid-in capital in accordance with SFAS No. 123(R) reflecting tax differences relating to employee stock option and restricted stock award transactions for the year ended December 31, 2008.

Goodwill was reduced by $0.8 million and $7.0 million in 2008 and 2007, respectively, largely due to the determination that tax contingencies established in connection with the Mykrolis acquisition were no longer necessary.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at December 31, 2008 and 2007 are as follows:

(In thousands)	**2008**	**2007**
Deferred tax assets attributable to:		
Accounts receivable	$ 760	$ 837
Inventory	3,305	3,535
Intercompany profit	1,896	6,188
Accruals not currently deductible for tax purposes	12,212	12,206
Net operating loss and credit carryforwards	26,742	31,506
Depreciation	4,501	5,308
Equity compensation	2,957	5,764
Asset impairments	4,024	—
Other, net	5,777	2,819
Gross deferred tax assets	62,174	68,163
Valuation allowance	(42,676)	—
Total deferred tax assets	19,498	68,163
Deferred tax liabilities attributable to:		
Repatriation reserve	3,628	—
Purchased intangible assets	5,450	19,045
Total deferred tax liabilities	9,078	19,045
Net deferred tax assets	$ 10,420	$49,118

In, 2007, the Company's Japanese subsidiary, Nihon Entegris KK (NEKK) declared and paid a dividend of 6.8 billon yen (approximately U.S. $60 million) and loaned 4.6 billion yen (approximately U.S. $40 million) to the Company. The dividend and loan were funded from available cash and lines of credit established with Japanese banks. Prior to the declaration of the dividend, the accumulated undistributed earnings of NEKK were considered to be reinvested indefinitely as allowed by the provisions of Accounting Principles Board (APB) Opinion No. 23, *Accounting for Income Taxes—Special Areas*, as amended by SFAS No. 109 (APB No.23), such that no U.S. tax

effect had been provided with respect to such accumulated undistributed NEKK earnings. The dividend and loan transactions resulted in a recharacterization of $100 million of NEKK's accumulated undistributed earnings as no longer being indefinitely reinvested, resulting in a 2007 U.S. tax benefit of approximately $9.4 million after reduction for state taxes of $1.9 million.

On December 24, 2008, NEKK loaned 2.0 billon yen (approximately U.S. $22 million) to the Company. The loan was funded from available cash and lines of credit established with Japanese banks. Prior to this loan, $56.3 million of the accumulated undistributed earnings of NEKK were considered to be reinvested indefinitely as allowed by the provisions of APB No. 23, such that no U.S. tax effect had been provided with respect to such accumulated undistributed NEKK earnings. The loan transaction resulted in a recharacterization of $22 million of NEKK's accumulated undistributed earnings as no longer being indefinitely reinvested.

At December 31, 2008, there were approximately $125.7 million of accumulated undistributed earnings of subsidiaries outside the United States that are considered to be reinvested indefinitely. Management has considered its future cash needs and affirms its intention to indefinitely invest such earnings overseas to be utilized for working capital purposes, expansion of existing operations, possible acquisitions and servicing local bank debt. No U.S. tax has been provided on such earnings. If they were remitted to the Company, applicable U.S. federal and foreign withholding taxes may be partially offset by available foreign tax credits. Management has concluded that it is impracticable to compute the full actual tax impact, but it has estimated that $4.2 million of withholding taxes would be incurred if the $125.7 million were distributed.

At December 31, 2008, the Company had state operating loss carryforwards of approximately $0.3 million, which begin to expire in 2011; foreign tax credit carryforwards of approximately $25.3 million, which expire in 2018; alternative minimum tax credit carryforwards of approximately $0.4 million; federal research tax credit carryforwards of approximately $2.4 million, which begin to expire in 2021; and foreign operating loss carryforwards of $2.3 million, $1.8 million of which does not expire under current law and $0.5 million which expires in 2011.

The Company adopted the provisions of FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes, an Interpretation of FASB Statement 109," (FIN No. 48), effective January 1, 2007. FIN No. 48 prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Benefits from tax positions should be recognized in the financial statements only when it is more likely than not that the tax positions will be sustained upon examination by the appropriate taxing authority that would have full knowledge of all relevant information. A tax position that meets the more-likely-than-not recognition threshold is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. Tax positions that previously failed to meet the more-likely-than-not recognition threshold should be recognized in the first subsequent financial reporting period in which that threshold is met. Previously recognized tax positions that no longer meet the more-likely-than-not recognition threshold should be derecognized in the first subsequent financial reporting period in which that threshold is no longer met. FIN No. 48 also provides guidance on the accounting for and disclosure of unrecognized tax benefits, interest and penalties.

Reconciliations of the beginning and ending balances of the total amounts of gross unrecognized tax benefits for the years ended December 31, 2008 and 2007 are as follows:

(In thousands)	**2008**	**2007**
Gross unrecognized tax benefits at beginning of year	$ 16,633	$11,679
Increases in tax positions for prior years	567	8,775
Decreases in tax positions for prior years	(10,563)	(4,919)
Increases in tax positions for current year	1,004	1,485
Settlements	(297)	(193)
Lapse in statute of limitations	(1,805)	(194)
Gross unrecognized tax benefits at end of year	$ 5,539	$16,633

The total amount of net unrecognized tax benefits that, if recognized, would affect the effective tax rate was $0.7 million at December 31, 2008.

The Company's policy for recording interest and penalties associated with audits is to record such items as a component of income before taxes. Penalties are recorded in "Other (gains) losses," and interest paid or received is recorded in interest expense or interest income, respectively, in the statement of income. For the years ended December 31, 2008 and 2007, the Company has accrued interest and penalties related to unrecognized tax benefits of $1.9 million and $3.1 million, respectively. $0.6 million and $0.5 million of interest and penalties were recognized in the statement of operations for the years ended December 31, 2008 and 2007, respectively.

The Company files income tax returns in the U.S. and in various state, local and foreign jurisdictions. The statute of limitations related to the consolidated Federal income tax return is closed for all years up to and including fiscal 2004. With respect to foreign jurisdictions, the statute of limitations varies from country to country, with the earliest open year for the Company's major foreign subsidiaries being 2003.

Due to the potential for resolution of foreign examinations, the expiration of various statutes of limitation, the filings for change in accounting methods and amended return filings, it is reasonably possible that the Company's gross unrecognized tax benefit balance may change within the next twelve months by approximately $0.8 million

(17) SHAREHOLDERS' EQUITY

Share Repurchase Program

On August 21, 2006, the Company's Board of Directors authorized a share repurchase program of up to $150 million over the succeeding 12 to 18 months. In connection with the share repurchase program the Company entered into an Accelerated Share Repurchase Agreement (ASRA) and a Collared Accelerated Share Repurchase Agreement (CASRA) with Goldman, Sachs & Co. (GS) on August 30, 2006. Under the ASRA, which was effective as of August 30, 2006, the Company acquired 4.7 million shares of common stock on September 5, 2006 from GS for $50.0 million, which was paid on September 5, 2006. The transaction was accounted for as a share retirement with common stock, paid-in capital and retained earnings reduced by $47 thousand, $28.2 million, and $21.7 million, respectively.

Under the CASRA, the Company paid $50.0 million for a prepaid forward contract, which was effective August 30, 2006, to repurchase the Company's common stock. The Company received deliveries of common stock of 3.0 million shares and 1.2 million shares on September 5, 2006 and October 6, 2006, respectively. The transaction was accounted for as a share retirement with common stock, paid-in capital and retained earnings reduced by $42 thousand, $25.2 million, and $19.8 million, respectively. $5.0 million of the $50.0 million payment was reflected as a prepaid forward contract for share repurchase in shareholders' equity, which was credited when the Company received additional shares under the CASRA.

The Company financed the ASRA and CASRA with its available cash equivalents and short-term investments. Under the terms of the ASRA and the CASRA, GS repurchased an equivalent number of shares in the open market from September 2006 through August 2007. Upon GS's completion of trading in August 2007, the Company's price under the ASRA was adjusted up based on the volume-weighted average price of the stock repurchased by GS, resulting in a cash payment to GS of $0.6 million in 2007, leaving $49.4 million remaining available for repurchases pursuant to the August 2006 authorization. Also in 2007, the Company received 0.4 million additional shares of common stock pursuant to the CASRA, based on the volume-weighted average price of the stock repurchased by GS.

In May 2007, the Company's Board of Directors authorized a self-tender offer program to acquire up to $250 million of the Company's common stock. A modified "Dutch Auction" tender offer began on May 11, 2007 and expired on June 8, 2007, and was subject to the terms and conditions described in the offering materials mailed to

the Company's shareholders and filed with the Securities and Exchange Commission. The tender offer was completed on June 14, 2007 with the Company purchasing 21.1 million shares of its common stock at a price of $11.80 per share. The Company incurred $2.3 million in costs associated with the tender offer for a total cost of approximately $251.4 million.

In November 2007, the Company's Board of Directors authorized a Rule 10b-5-1 trading plan to acquire up to $49.4 million of the Company's common stock. The share buyback program, which commenced on December 1, 2007 and ended on August 1, 2008, was established in accordance with the provisions of Rule 10b5-1 and Rule 10b-18 under the Securities Exchange Act of 1934. Under the trading plan, the Company purchased 4.0 million and 0.5 million shares of its common stock in 2008 and 2007, respectively, at an average price of $7.28 and $8.99 per share in 2008 and 2007, respectively. The total cost of the purchases was $28.9 million and $4.1 million in 2008 and 2007, respectively.

Share-based Compensation Expense

The Company follows Statement of Financial Accounting Standards No. 123 (revised 2004), *Share-Based Payment*, (SFAS 123(R)) which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors including employee stock options and employee stock purchases related to the Employee Stock Purchase Plan (employee stock purchases) to be based on estimated fair values. The Company adopted SFAS 123(R) as of August 28, 2005 using the modified prospective transition method. In accordance with the modified prospective transition method, the Company's consolidated financial statements for prior periods were not restated to reflect, and did not include, the impact of SFAS 123(R). Share-based compensation expense recorded under SFAS 123(R) for the years ended December 31, 2008, 2007 and 2006 was $7.4 million, $10.5 million and $14.8 million, respectively.

SFAS 123(R) requires companies to estimate the fair value of share-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods in the Company's consolidated statement of operations.

Share-based compensation expense is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Share-based compensation expense recognized in the Company's Consolidated Statement of Operations for the years ended December 31, 2008, 2007 and 2006 includes compensation expense for share-based payment awards granted prior to, but not yet vested as of August 27, 2005 based on the grant date fair value estimated in accordance with the pro forma provisions of SFAS 123.

Share-based payment awards in the form of restricted stock awards for 0.8 million shares, 0.9 million shares, and 1.1 million shares were granted to employees during the years ended December 31, 2008, 2007 and 2006, respectively. Share-based payment awards in the form of stock awards subject to performance conditions for up to 0.5 million share, 0.9 million shares and 0.9 million shares were also granted to certain employees during the years ended December 31, 2008, 2007 and 2006, respectively.

Share-based payment awards in the form of stock option awards for 0.9 million options were granted to employees during the year ended December 31, 2008 with no stock options granted during the years ended December 31, 2007 and 2006. Compensation expense is based on the grant date fair value estimated in accordance with the provisions of SFAS 123(R).

In conjunction with the adoption of SFAS 123(R), the Company changed its method of attributing the value of share-based compensation to expense from the accelerated multiple-option approach to the straight-line single option method. Compensation expense for all share-based payment awards granted on or prior to August 27, 2005 is recognized using the accelerated multiple-option approach, while compensation expense for all share-based payment awards granted subsequent to August 27, 2005 is recognized using the straight-line single-option method. Because share-based compensation expense recognized in the Consolidated Statement of Operations for

the years ended December 31, 2008, 2007 and 2006 is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

On November 10, 2005, the Financial Accounting Standards Board (FASB) issued FASB Staff Position No. FAS 123(R)- 3, *Transition Election Related to Accounting for Tax Effects of Share-Based Payment Awards* (FSP 123(R)-3). An entity could take up to one year from the effective date of FSP 123(R)-3 to evaluate its available transition alternatives and make its one-time election. The Company adopted the alternative transition method provided in the FASB Staff Position for calculating the tax effects of share-based compensation pursuant to SFAS 123(R). The alternative transition method includes simplified methods to establish the beginning balance of the additional paid-in capital pool (APIC pool) related to the tax effects of employee share-based compensation and to determine the subsequent impact on the APIC pool and consolidated statements of cash flows of the tax effects of employee share-based compensation awards that are outstanding upon adoption of SFAS 123(R).

Employee Stock Purchase Plan

The Company has the Entegris, Inc. Employee Stock Purchase Plan (ESPP). A total of 4.0 million common shares are reserved for issuance under the ESPP. The ESPP allows employees to elect, at six-month intervals, to contribute up to 10% of their compensation, subject to certain limitations, to purchase shares of common stock at the lower of 85% of the fair market value on the first day or last day of each six-month period. The Company treats the ESPP as a compensatory plan under SFAS 123(R). As of December 31, 2008, 1.6 million shares had been issued under the ESPP. At December 31, 2008, 2.4 million shares remained available for issuance under the ESPP. Employees purchased 0.3 million shares, 0.2 million shares, and 0.2 million shares, at a weighted-average price of $6.37, $8.63, and $8.06 during the years ended December 31, 2008, 2007 and 2006, respectively.

Employee Stock Option Plans

As of December 31, 2008, the Company had five stock incentive plans: the Entegris, Inc. 1999 Long-Term Incentive and Stock Option Plan (the 1999 Plan), the Entegris, Inc. Outside Directors' Option Plan (the Directors' Plan) and three former Mykrolis stock option plans assumed by the Company on August 10, 2005: The 2001 Equity Incentive Plan (the 2001 Plan), the 2003 Employment Inducement and Acquisition Stock Option Plan (the Employment Inducement Plan) and the 2001 Non-Employee Director Stock Option Plan (the 2001 Directors Plan). At present, the Company intends to issue new common shares upon the exercise of stock options under each of these plans. The plans are described in more detail below.

1999 Plan: The 1999 Plan provides for the issuance of share-based awards to selected employees, directors, and other persons (including both individuals and entities) who provide services to the Company or its affiliates. Under the 1999 Plan, the Board of Directors determines the number of shares for which each option is granted, the rate at which each option is exercisable and whether restrictions will be imposed on the shares subject to the awards. The term of options issued under the 1999 Plan has been ten years, generally exercisable ratably in 25% increments over the 48 months following grant, with exercise prices equal to 100% of the fair market value of the Company's common stock on the date of grant.

The Directors' Plan and the 2001 Directors Plan: The Directors' Plan provides for the grant to each outside director of an option to purchase 15,000 shares on the date the individual becomes a director and for the annual grant to each outside director, at the choice of the Directors' Plan administrator (defined as the Board of Directors or a committee of the Board), of either an option to purchase 9,000 shares, or a restricted stock award of up to 3,000 shares. Options are exercisable six months subsequent to the date of grant. Under the Directors' Plan, the term of options shall be ten years and the exercise price for shares shall not be less than 100% of the fair market value of the common stock on the date of grant of such option. The 2001 Directors Plan provides for the grant to each newly elected eligible director of options to purchase 15,000 shares of common stock on the date of

his or her first election and for the annual grant of options to purchase 10,000 shares of common stock for each subsequent year of service as a director. The exercise price of the stock options may not be less than the fair market value of the stock at the date of grant. On August 10, 2005 the Company's Board of Directors determined that the equity compensation paid to non-employee directors would be an aggregate of 10,000 shares of restricted stock per annum, inclusive of the amounts specified in the above described plans.

2001 Plan: The 2001 Plan provides for the issuance of share-based awards to selected employees, directors, and other persons (including both individuals and entities) who provide services to the Company or its affiliates. The 2001 Plan has a term of ten years. Under the 2001 Plan, the Board of Directors determines the term of each option, option price, number of shares for which each option is granted, whether restrictions will be imposed on the shares subject to options, and the rate at which each option is exercisable. The exercise price for incentive stock options may not be less than the fair market value per share of the underlying common stock on the date granted (110% of fair market value in the case of holders of more than 10% of the voting stock of the Company). The 2001 Plan contains an "evergreen" provision, which increases the number of shares in the pool of options available for grant annually by 1% of the number of shares of common stock outstanding on the date of the Annual Meeting of Stockholders or such lesser amount determined by the Board of Directors. Under NASDAQ rules new grants and awards under the 2001 Plan may only be made to employees and directors of the Company who were employees or directors of Mykrolis prior to the merger or who were hired by the Company subsequent to the merger.

Employment Inducement Plan: The Employment Inducement Plan is a non-shareholder approved plan that provides for the issuance of stock options and other share-based awards to newly-hired employees and to employees of companies acquired by the Company. The Employment Inducement Plan has a term of ten years. Options granted under the Employment Inducement Plan have a maximum term of ten years and an exercise price equal to the fair market value of the Company's common stock on the date of grant. The Board of Directors determines other terms of option grants including, number of shares, restrictions and the vesting period. The number of reserved shares under the Employment Inducement Plan automatically increases annually by 0.25% of the number of shares of common stock outstanding on the date of the Annual Meeting of Stockholders unless otherwise determined by the Board of Directors.

Millipore Plan

In addition to the Company's plans, certain employees of the Company who were employees of Mykrolis were granted stock options under a predecessor's share-based compensation plan. The Millipore 1999 Stock Incentive Plan (the Millipore Plan) provided for the issuance of stock options and restricted stock to key employees as incentive compensation. The exercise price of a stock option was equal to the fair market value of Millipore's common stock on the date the option was granted and its term was generally ten years and vested over four years. Options granted to the Company's employees under the Millipore Plan in the past were converted into options to acquire Mykrolis common stock pursuant to the spin-off of Mykrolis by Millipore, and then were converted into options to acquire the Company's common stock pursuant to the merger with Mykrolis.

General Option Information

Option activity for the 1999 Plan and the Directors' Plan for the years ended December 31, 2008, 2007 and 2006 is summarized as follows:

	2008		2007		2006	
(Shares in thousands)	Number of shares	Weighted average exercise price	Number of shares	Weighted average exercise price	Number of shares	Weighted average exercise price
Options outstanding, beginning of year	3,505	$8.77	6,383	$ 7.76	8,501	$ 7.35
Granted	788	6.60	—	—	—	—
Exercised	(284)	4.12	(2,627)	6.01	(1,925)	5.56
Canceled	(799)	9.31	(251)	12.10	(193)	11.35
Options outstanding, end of year	3,210	$8.49	3,505	$ 8.77	6,383	$ 7.76
Options exercisable, end of year	2,542	$9.00	3,505	$ 8.77	6,379	$ 7.76

Options outstanding for the 1999 Plan and the Directors' Plan at December 31, 2008 are summarized as follows:

(Shares in thousands)	Options outstanding			Options exercisable	
Range of exercise prices	Number outstanding	Weighted average remaining life in years	Weighted-average exercise price	Number exercisable	Weighted average exercise price
$2.10	70	7.0 years	$ 2.10	—	$ —
$4.22	68	0.7 years	4.22	68	4.22
$5.90	380	3.8 years	5.90	380	5.90
$6.96 to $7.49	664	5.8 years	7.08	66	7.49
$8.04 to $10.00	1,267	3.6 years	8.55	1,267	8.55
$10.99 to $11.99	655	3.5 years	11.60	655	11.60
$12.71 to $14.65	106	4.9 years	13.57	106	13.57
	3,210	4.1 year		2,542	

The weighted average remaining contractual term for options outstanding and exercisable for the 1999 Plan and the Directors' Plan at December 31, 2008 was 3.5 years and 4.1 years, respectively.

Option activity for the 2001 Plan, the Employment Inducement Plan, the 2001 Directors Plan and the Millipore plan for the years ended December 31, 2008, 2007 and 2006, is summarized as follows:

	2008		2007		2006	
(Shares in thousands)	Number of shares	Weighted average exercise price	Number of shares	Weighted average exercise price	Number of Shares	Weighted average exercise price
Options outstanding, beginning of year	4,891	$8.67	6,422	$ 8.62	7,998	$ 8.53
Options granted	150	6.43	—	—	—	—
Options exercised	(57)	4.66	(1,345)	8.24	(1,102)	7.09
Options expired	(1,505)	9.86	(186)	10.23	(474)	10.74
Options outstanding, end of year	3,479	$8.12	4,891	$ 8.67	6,422	$ 8.62
Options exercisable	3,329	$8.20	4,723	$ 8.67	6,080	$ 8.63

Options outstanding for the 2001 Plan, Employment Inducement Plan, 2001 Directors Plan and Millipore Plan at December 31, 2008 are summarized as follows:

(Shares in thousands)	Options outstanding			Options exercisable	
Range of exercise prices	**Number outstanding**	**Weighted average remaining life in years**	**Weighted average exercise price**	**Number exercisable**	**Weighted-average exercise price**
$4.30-$4.89	447	0.9	$ 4.86	447	$ 4.86
$5.66-$8.09	1,134	1.3	6.15	984	6.11
$8.35-$9.83	723	2.8	8.49	723	8.49
$10.09-$10.91	253	1.8	10.70	253	10.70
$11.12-$11.76	922	2.1	11.13	922	11.13
	3,479	1.8	$ 8.12	3,329	$ 8.20

The weighted average remaining contractual term for options outstanding and exercisable for the 2000 Plan, the Employment Inducement Plan, the 2001 Directors' Plan and the Millipore Plan at December 31, 2008 was 1.8 years and 1.6 years, respectively.

For all plans, the Company had shares available for future grants of 11.0 million shares, 8.9 million shares, and 8.1 million shares at December 31, 2008, December 31, 2007, and December 31, 2006, respectively.

For all plans, the total pretax intrinsic value of stock options exercised during the years ended December 31, 2008 and 2007 was $1.1 million and $18.0 million, respectively. The aggregate intrinsic value, which represents the total pretax intrinsic value based on the Company's closing stock price of $2.19 at December 31, 2008, which theoretically could have been received by the option holders had all option holders exercised their options as of that date, was zero for both options outstanding and options exercisable. The total number of in-the-money options exercisable as of December 31, 2008 was zero.

During the years ended December 31, 2008, 2007 and 2006 certain existing stock option grants and restricted stock awards were modified in connection with the execution of various severance and separation agreements. Under the agreements, the terms of unvested and vested stock option grants were modified with no future service required by the affected individuals. Accordingly, under the measurement principles of SFAS No. 123(R), incremental share-based compensation expense of $0.4 million, $0.1 million and $0.4 million, respectively, was recognized for the value of the modified stock option grants at the date of the agreements' execution.

During the years ended December 31, 2008, 2007 and 2006 the Company received cash from the exercise of stock options totaling $1.4 million, $28.1 million, and $18.5 million, respectively. During the years ended December 31, 2008, 2007 and 2006, the Company received cash of $1.7 million, $1.8 million, and $1.5 million, respectively, in employee contributions to the Entegris, Inc. Employee Stock Purchase Plan.

Restricted Stock Awards

Restricted stock awards are awards of common stock that are subject to restrictions on transfer and to a risk of forfeiture if the awardee terminates employment with the Company prior to the lapse of the restrictions. The value of such stock is determined using the market price on the grant date. Compensation expense is recorded over the applicable restricted stock vesting periods. In conjunction with the adoption of SFAS 123(R), the Company changed its method of attributing the value of share-based compensation to expense from the accelerated multiple-option approach to the straight-line single option method. Accordingly, compensation expense for restricted stock awards granted on or prior to August 27, 2005 are recorded using the accelerated multiple-option approach, while compensation expense for restricted stock awards granted subsequent to August 27, 2005 are recognized using the straight-line single-option method. A summary of the Company's restricted stock activity for the years ended December 31, 2008, 2007 and 2006 is presented in the following table:

(Shares in thousands)	2008		2007		2006	
	Number of Shares	Weighted average grant date fair value	Number of shares	Weighted average grant date fair value	Number of shares	Weighted average grant date fair value
Unvested, beginning of year	1,873	$10.89	1,950	$10.71	1,526	$11.03
Granted	797	6.86	897	11.09	1,131	10.46
Vested	(773)	10.88	(801)	10.74	(631)	11.04
Forfeited	(346)	9.83	(173)	10.60	(76)	10.69
Unvested, end of year	1,551	$ 9.06	1,873	$10.89	1,950	$10.71

The weighted average remaining contractual term for unvested restricted shares at December 31, 2008 and 2007 was 2.2 years and 2.4 years, respectively.

As of December 31, 2008, the total compensation cost related to nonvested stock options and restricted stock awards not yet recognized was $1.3 million and $8.5 million, respectively, that is expected to be recognized over the next 2.3 years on a weighted-average basis. These amounts exclude restricted stock awards for which performance criteria have yet to be determined and, accordingly, grant dates for those awards have not been established.

During the years ended December 31, 2008, 2007 and 2006, Entegris, Inc. awarded performance stock for up to 0.5 million, 0.9 million, and 0.9 million shares for each year to be issued upon the achievement of performance conditions (Performance Shares) under the Company's stock incentive plans to certain officers and other key employees. The Performance Shares will be earned if, and to the extent that, various financial performance criteria for fiscal years 2006 through 2010 are achieved. The number of performance shares earned in a given year may vary based on the level of achievement of financial performance objectives for that year or multi-year period. If the Company's performance fails to achieve the specified performance threshold, then the Performance Shares allocated to that financial performance criteria are forfeited. Each annual tranche will have its own service period beginning at the date (the grant date) at which the Board of Directors establishes the annual performance targets for the applicable year. Compensation expense to be recorded in connection with the Performance Shares will be based on the grant date fair value of the Company's common stock. Awards of Performance Shares are expensed over the service period based on an evaluation of the probability of achieving the performance objectives.

For Performance Share awards granted in 2007, 50% of the shares are available to be awarded, if and to the extent that two financial performance criteria for fiscal year 2007 are achieved, while the remaining 50% of the shares are available to be awarded if and to the extent that a third financial performance criteria for the three-year period including fiscal years 2007 through 2009 is achieved. The number of performance shares earned may vary

based on the level of achievement of financial performance criteria indicated. If the Company's performance fails to achieve the specified performance threshold, then the performance shares are forfeited. Compensation expense to be recorded in connection with the 2007 Performance Shares is based on the grant date fair value of the Company's common stock on the date the financial performance criteria were established. All shares earned in connection with the 2007 Performance Share awards are also subject to service conditions. Shares available upon attainment of the financial performance criteria for fiscal year 2007 vest annually over a four-year period, while shares available upon attainment of the financial performance criteria for the three-year period from fiscal years 2007 through 2009 will be three-quarters vested at the end of 2009, with the final 25% vesting in 2010.

For Performance Share awards granted in 2008, 100% of the shares are available to be awarded if and to the extent that financial performance criteria for the three-year period including fiscal years 2008 through 2010 are achieved. The number of performance shares earned may vary based on the level of achievement of financial performance criteria indicated. If the Company's performance fails to achieve the specified performance threshold, then the performance shares are forfeited. Compensation expense to be recorded in connection with the 2008 Performance Shares is based on the grant date fair value of the Company's common stock on the date the financial performance criteria were established. All shares earned in connection with the 2008 Performance Share awards are also subject to service conditions. Shares available upon attainment of the financial performance criteria for the three-year period from fiscal years 2008 through 2010 will be three-quarters vested at the end of 2010, with the final 25% vesting in 2011.

Certain unvested restricted shares of Mykrolis common stock issued in connection with restricted stock awards made prior to the merger with the Company were exchanged for unvested restricted shares of the Company's common stock, with the number of shares adjusted for the exchange ratio of 1.39. Accordingly, 0.3 million restricted Mykrolis shares were exchanged for 0.4 million restricted shares of the Company's common stock. The intrinsic value of $2.5 million associated with the unvested restricted stock was recorded as deferred compensation as part of the purchase price allocation for the Mykrolis acquisition. This balance is being charged to earnings over the remaining vesting periods that extend to 2008.

Valuation and Expense Information under SFAS 123(R)

The following table summarizes the allocation of share-based compensation expense related to employee stock options, restricted stock awards and grants under the employee stock purchase plan accounted for under SFAS 123(R) for the years ended December 31, 2008, 2007 and 2006:

(In thousands)	2008	2007	2006
Cost of sales	$1,026	$ 1,800	$ 3,000
Engineering, research and development expenses	513	180	230
Selling, general and administrative expenses	5,836	8,520	11,546
Share-based compensation expense	7,375	10,500	14,776
Tax benefit	2,751	3,948	5,556
Share-based compensation expense, net of tax	$4,624	$ 6,552	$ 9,220

Stock options

Share-based payment awards in the form of stock option awards for 0.9 million options were granted to employees during the year ended December 31, 2008 with no stock option awards granted during the years ended December 31, 2007 and 2006. Compensation expense is based on the grant date fair value estimated in accordance with the provisions of SFAS 123(R). The awards vest annually over a three-year period and have a contractual term of 7 years. The Company estimates the fair value of stock options using the Black-Scholes valuation model, consistent with the provisions of SFAS No. 123(R). Key inputs and assumptions used to estimate the fair value of stock options include the grant price of the award, the expected option term, volatility

of the Company's stock, the risk-free rate and the Company's dividend yield. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards, and subsequent events are not indicative of reasonableness of the original estimates of fair value made by the Company. The weighted-average grant date exercise price of options awarded in 2008 was $6.58.

The fair value of each stock option grant was estimated at the date of grant using a Black-Scholes option pricing model. The following table presents the weighted-average assumptions used in the valuation and the resulting weighted-average fair value per option granted for the year ended December 31, 2008:

Employee stock options:	2008
Volatility	37.1%
Risk-free interest rate	3.1%
Dividend yield	0%
Expected life	4 years
Weighted average fair value per option	$ 2.17

A historical daily measurement of volatility is determined based on the expected life of the option granted. The risk-free interest rate is determined by reference to the yield on an outstanding U.S. Treasury note with a term equal to the expected life of the option granted. Expected life is determined by reference to the Company's historical experience. The Company determines the dividend yield by dividing the current annual dividend on the Company's stock by the option exercise price.

Shareholder Rights Plan On July 27, 2005, the Company's Board of Directors adopted a shareholder rights plan (the "Rights Plan") pursuant to which Entegris declared a dividend on August 8, 2005 to its shareholders of record on that date of one preferred share purchase right (a "Right") for each share of Entegris common stock owned on August 8, 2005. Each Right entitles the holder to purchase one-hundredth of a share of a series of preferred stock at an exercise price of $50, subject to adjustment as provided in the Rights Plan. The Rights Plan is designed to protect Entegris' shareholders from attempts by others to acquire Entegris on terms or by using tactics that could deny all shareholders the opportunity to realize the full value of their investment. The Rights are attached to the shares of the Company's common stock until certain triggering events specified in the Rights Agreement occur, including, unless approved by the Company's Board of Directors, an acquisition by a person or group of specified levels of beneficial ownership of Entegris common stock or a tender offer for Entegris common stock. Upon the occurrence of any of these triggering events, the Rights authorize the holders to purchase at the then-current exercise price for the Rights, that number of shares of the Company's common stock having a value equal to twice the exercise price. The Rights are redeemable by the Company for $0.01 and will expire on August 8, 2015. One of the events which will trigger the Rights is the acquisition, or commencement of a tender offer, by a person (an Acquiring Person, as defined in the shareholder rights plan), other than Entegris or any of its subsidiaries or employee benefit plans, of 15% or more of the outstanding shares of the Company's common stock. An Acquiring Person may not exercise a Right.

(18) BENEFIT PLANS

401(k) Plan The Company maintains the Entegris, Inc. 401(k) Savings and Profit Sharing Plan (the 401(k) Plan) that qualifies as a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the Plan, eligible employees may defer a portion of their pretax wages, up to the Internal Revenue Service annual contribution limit. Entegris matches 100% of employees' contributions on the first 3% of eligible wages and 50% of employees' contributions on the next 2% of eligible wages, or a maximum match of 4% of the employee's eligible wages. In addition to the matching contribution, the Company's Board of Directors may, at its discretion, declare a profit sharing contribution as a percentage of eligible wages based on the company's worldwide operating results. The employer profit sharing and matching contribution expense under the Plans was $3.0 million, $5.9 million and $5.8 million in the fiscal years ended December 31, 2008, 2007 and 2006, respectively.

Supplemental Savings and Retirement Plan The Company also maintains the Supplemental Savings and Retirement Plan (the "Supplemental Plan"). Under the Supplemental Plan, certain senior executives are allowed certain salary deferral benefits that would otherwise be lost by reason of restrictions imposed by the Internal Revenue Code limiting the amount of compensation which may be deferred under tax-qualified plans. Liabilities of $2.2 million and $3.2 million at December 31, 2008 and 2007, respectively, related to the Supplemental Plan are included in the consolidated balance sheets under the caption "Pension benefit obligations and other liabilities". The Company recorded income of $0.8 million in the year ended December 31, 2008 and expense of $0.3 million and $0.5 million in the years ended December 31, 2007 and 2006, respectively.

Defined Benefit Plans The employees of the Company's subsidiaries in Japan and Taiwan are covered in defined benefit pension plans. The Company uses a December 31 measurement date for its pension plans.

Effective December 31, 2006, the Company adopted SFAS No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans*. Under SFAS No. 158, the Company is required to recognize the overfunded or underfunded status of its defined benefit pension plans as an asset or liability in its consolidated balance sheets and to recognize changes in that funded status in the year in which the changes occur through comprehensive income. SFAS No. 158 also requires the measurement of the funded status of a plan as of the date of its year-end consolidated balance sheet. The Company's existing policy was to measure the funded status of it plans as of the balance sheet date; accordingly, the new measurement date requirements of SFAS No. 158 had no impact.

The tables below set forth the Company's estimated funded status as of December 31, 2008 and 2007:

(In thousands)	2008	2007
Change in benefit obligation:		
Benefit obligation at beginning of period	$ 17,367	$ 14,297
Plan amendments	—	530
Service cost	1,411	1,165
Interest cost	334	307
Actuarial (gains) losses	(63)	1,183
Benefits paid	(1,210)	(1,007)
Foreign exchange impact	4,031	892
Benefit obligation at end of period	21,870	17,367
Change in plan assets:		
Fair value of plan assets at beginning of period	4,442	3,824
Plan amendments	—	(510)
Return on plan assets	(1,286)	349
Employer contributions	1,047	675
Benefits paid	(426)	(129)
Foreign exchange impact	910	233
Fair value of plan assets at end of period	4,687	4,442
Funded status:		
Plan assets less than benefit obligation	(17,183)	(12,925)
Net amount recognized	$(17,183)	$(12,925)
Amounts recognized in the consolidated balance sheet consist of:		
Noncurrent liability	$(17,183)	$(12,925)
Accumulated other comprehensive loss, net of taxes	1,961	951
Amounts recognized in accumulated other comprehensive loss, net of tax consist of:		
Net actuarial loss	$ 1,990	$ 417
Prior service cost	1,268	209
Unrecognized transition obligation	(14)	960
Gross amount recognized	3,244	1,586
Deferred income taxes	(1,283)	(635)
Net amount recognized	$ 1,961	$ 951

Information for pension plans with an accumulated benefit obligation in excess of plan assets as of December 31, 2008 and 2007:

(In thousands)	2008	2007
Projected benefit obligation	$21,870	$17,367
Accumulated benefit obligation	19,855	15,495
Fair value of plan assets	4,687	4,422

The components of the net periodic benefit cost for the years ended December 31, 2008, 2007 and 2006 are as follows:

(In thousands)	2008	2007	2006
Pension benefits:			
Service cost	$1,411	$1,165	$1,248
Interest cost	334	307	264
Expected return on plan assets	(74)	(30)	(33)
Amortization of prior service cost	134	10	10
Amortization of net transition obligation	(1)	(1)	—
Recognized actuarial net loss	66	114	75
Net periodic pension benefit cost	$1,870	$1,565	$1,564

The estimated amount that will be amortized from accumulated other comprehensive income into net periodic benefit cost in 2009 is as follows:

(In thousands)	
Transition obligation	$ (1)
Prior service cost	(105)
	$(106)

Assumptions used in determining the benefit obligation and net periodic benefit cost for the Company's pension plans for the years ended December 31, 2008, 2007 and 2006 are presented in the following table as weighted-averages:

	2008	2007	2006
Benefit obligations:			
Discount rate	1.66%	1.78%	2.06%
Rate of compensation increase	6.56%	6.53%	2.26%
Net periodic benefit cost:			
Discount rate	1.77%	2.05%	1.84%
Rate of compensation increase	6.55%	2.26%	2.26%
Expected return on plan assets	1.58%	0.90%	0.90%

The discount rate used by the Company is based on rates of long-term government bonds.

Plan Assets

At December 31, 2008, the majority of the Company's pension plan assets are invested in a Japanese insurance company's investment funds which consist mainly of equity and debt securities. There is interest rate risk associated with the valuation of these investments. The long-term rate of return on Japanese pension plan assets was developed through an analysis of historical returns and the fund's current guaranteed return rate. Estimates of future returns are based on a continuation of the existing guaranteed rate of return. The remaining portion of the Company's plan assets is deposited in Bank of Taiwan in the form of cash, where Bank of Taiwan is the assigned funding vehicle for the statutory retirement benefit. The Company's pension plan weighted average asset allocation at December 31, 2008 and 2007, by asset category, are as follows:

Asset category:	2008	2007
Equity securities	45%	57%
Debt securities	40%	35%
Other	15%	8%
Total	100%	100%

Cash Flows

The Company expects to contribute $1.2 million to its defined benefit pension plans during 2009. The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

(In thousands)	
2009	$ 624
2010	920
2011	589
2012	472
2013	549
Years 2014-2018	4,302

(19) FAIR VALUE MEASUREMENTS

Effective January 1, 2008, the Company adopted FASB Statement No. 157, *Fair Value Measurements*, (SFAS No. 157), except for the nonfinancial assets and liabilities that are allowed to be deferred in accordance with FASB Staff Position (FSP) 157-2. FSP 157-2 delays the effective date of SFAS No.157 for nonfinancial assets and nonfinancial liabilities, except for items that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). This FSP defers the effective date of Statement 157 for the applicable items to fiscal years beginning after November 15, 2008. The Company will not apply the provisions of SFAS No. 157 until January 1, 2009 for the following major categories of nonfinancial assets and liabilities from the Consolidated Balance Sheet: Property, plant and equipment-net; intangible assets-net and accrued liabilities.

SFAS No. 157 provides a framework for measuring fair value under generally accepted accounting principles. As defined in SFAS No. 157, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The Company utilizes market data or assumptions that the Company believes market participants would use in pricing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique. These inputs can be readily observable, market-corroborated or generally unobservable.

SFAS No. 157 establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The three levels of the fair value hierarchy defined by SFAS No. 157 are as follows:

Level 1 Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis. Level 1 primarily consists of financial instruments such as exchange-traded derivatives, listed equities and U.S. government Treasury securities.

Level 2 Pricing inputs are other-than-quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reporting date. Level 2 includes those financial instruments that are valued using models or other valuation methodologies. These models are primarily industry-standard models that consider various assumptions, including quoted forward prices for commodities, time value, volatility factors, and current market and contractual prices for the underlying instruments, as well as other relevant economic measures. Substantially all of these assumptions are observable in the marketplace throughout the full term of the instrument, can be derived from observable data or are supported by observable levels at which transactions are executed in the marketplace. Instruments in this category include non-exchange-traded derivatives such as over-the-counter forwards, options and repurchase agreements.

Level 3 Pricing inputs include significant inputs that are generally less observable from objective sources. These inputs may be used with internally developed methodologies that result in management's best estimate of fair value from the perspective of a market participant. Level 3 instruments include those that may be more structured or otherwise tailored to customers' needs. At each balance sheet date, the Company performs an analysis of all instruments subject to SFAS No. 157 and includes in Level 3 all of those whose fair value is based on significant unobservable inputs.

The Company also adopted FASB Statement No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities — Including an amendment of FASB Statement No. 115* (SFAS No. 159), effective January 1, 2008. SFAS No. 159 provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments and written loan commitments not previously recorded at fair value. Upon the adoption of SFAS No. 159, the Company did not elect to apply the fair value provisions to any of the items set forth in SFAS No. 159.

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2008 include derivatives. The Company periodically enters into forward foreign currency contracts to reduce exposures relating to rate changes in certain foreign currencies. Certain exposures to credit losses related to counterparty nonperformance exist. However, the Company does not anticipate nonperformance by the counterparties since they are large, well-established financial institutions. None of these derivative instruments are accounted for as a hedge transaction under the provisions of SFAS No. 133 as of December 31, 2008. Accordingly, changes in the fair value of forward foreign currency contracts are recorded as a component of net income. As of December 31, 2008, the Company held one foreign currency forward contract with a notional amount of $1.8 million hedging Euros. As of December 31, 2008, such instruments represented an asset with a fair value of $0.1 million based on quotations from the financial institutions, which management considers a level 2 input. Assets measured at fair value on a recurring basis consisted of the following types of instruments as of December 31, 2008:

	Fair value measurements at reporting date using		
(In thousands)	**Quoted prices in active markets for identical instruments (Level 1)**	**Significant observable other inputs (Level 2)**	**Significant unobservable inputs (Level 3)**
Foreign currency forward contract	—	$79	—

(20) EARNINGS PER SHARE (EPS)

Basic EPS is computed by dividing net (loss) income by the weighted average number of shares of common stock outstanding during each period. The following table presents a reconciliation of the share amounts used in the computation of basic and diluted earnings per share for the years ended December 31, 2008, 2007 and 2006:

(In thousands)	**2008**	**2007**	**2006**
Basic (loss) earnings per share—Weighted common shares outstanding	112,653	122,557	135,116
Weighted common shares assumed upon exercise of options	—	1,617	2,377
Weighted common shares assumed upon vesting of restricted common stock	—	766	999
Diluted (loss) earnings per share—Weighted common shares outstanding	112,653	124,940	138,492

Approximately 3.6 million and 4.5 million of the Company's stock options were excluded from the calculation of diluted earnings per share in the fiscal years ended December 31, 2007 and 2006, respectively, because the exercise prices of the stock options were greater than the average price of the Company's common stock, and therefore their inclusion would have been antidilutive. The effect of the inclusion of stock options and unvested restricted common stock for the year ended December 31, 2008 would have been anti-dilutive.

(21) SEGMENT INFORMATION

Entegris operates in one segment for the design, development, manufacture, marketing and sale of material integrity management products and services predominantly within the semiconductor industry. All products are sold on a worldwide basis. In accordance with SFAS No. 131, *Disclosures About Segments of an Enterprise and Related Information*, the Company's chief operating decision-maker has been identified as the President and Chief Executive Officer, who reviews operating results to make decisions about allocating resources and assessing performance for the entire company. Since Entegris operates in one reportable segment, all financial information required by SFAS 131 can be found in the consolidated financial statements.

The following table summarizes total net sales by markets served for the years ended December 31, 2008, 2007 and 2006:

(In thousands)	2008	2007	2006
Net sales:			
Semiconductor	$419,132	$482,083	$526,243
Data storage	24,526	37,334	44,461
Other	111,041	106,821	102,178
	$554,699	$626,238	$672,882

The following tables summarize total net sales, based upon the country to which sales to external customers were made, and property, plant and equipment attributed to significant countries for the years ended December 31, 2008, 2007 and 2006:

(In thousands)	2008	2007	2006
Net sales:			
United States	$153,098	$163,146	$193,887
Japan	115,589	144,231	153,454
Germany	21,264	30,508	25,635
Taiwan	72,792	89,012	82,039
Singapore	29,603	34,168	30,648
Korea	40,954	51,477	55,901
Malaysia	14,750	21,230	24,945
China	21,868	18,504	15,507
Other	84,781	73,962	90,866
	$554,699	$626,238	$672,882

(In thousands)	2008	2007	2006
Property, plant and equipment:			
United States	$ 94,175	$ 63,774	$ 69,463
Japan	30,891	22,481	21,114
Malaysia	26,247	27,270	22,874
Other	8,425	7,632	7,536
	$159,738	$121,157	$120,987

In the years ended December 31, 2008, 2007 and 2006, no single nonaffiliated customer accounted for 10% or more of net sales. In the years ended December 31, 2008, 2007 and 2006, net sales to the Company's top ten customers accounted for approximately 26%, 28% and 27%, respectively, of the Company's net sales.

(22) COMMITMENTS AND CONTINGENT LIABILITIES

The Company is subject to various claims, legal actions, and complaints arising in the ordinary course of business. The Company believes the final outcome of these matters will not have a material adverse effect on its consolidated financial position or results of operations. The Company expenses legal costs as incurred. The following discussion provides information regarding certain litigation to which the Company was a party that were pending as of December 31, 2008.

As previously disclosed, on March 3, 2003 the Company's predecessor, Mykrolis Corporation, filed a lawsuit against Pall Corporation in the United States District Court for the District of Massachusetts alleging infringement of two of the Company's U.S. patents by certain fluid separation systems and related assemblies

used in photolithography applications manufactured and sold by the defendant. The Company's lawsuit also sought a preliminary injunction preventing the defendant from the manufacture, use, sale, offer for sale or importation into the U.S. of any infringing product. On April 30, 2004, the Court issued a preliminary injunction against Pall Corporation and ordered Pall to immediately stop making, using, selling, or offering to sell within the U.S., or importing into the U.S., its PhotoKleen EZD-2 Filter Assembly products or "any colorable imitation" of those products. On January 18, 2005, the Court issued an order holding Pall Corporation in contempt of court for the violation of the preliminary injunction and ordering Pall to disgorge all profits earned from the sale of its PhotoKleen EZD-2 Filter Assembly products and colorable imitations thereof from the date the preliminary injunction was issued through January 12, 2005. In addition, Pall was also ordered to reimburse Mykrolis for certain of its attorney's fees associated with the contempt and related proceedings. The Court's order also dissolved the preliminary injunction, effective January 12, 2005, based on certain prior art cited by Pall which it alleged raised questions as to the validity of the patents in suit. On February 17, 2005, the Company filed notice of appeal to the U.S. Circuit Court of Appeals for the Federal Circuit appealing the portion of the Court's order that dissolved the preliminary injunction and Pall filed a notice of appeal to that court with respect to the finding of contempt and the award of attorneys' fees. On June 13, 2007 the Court of Appeals issued an opinion dismissing Pall's appeal for lack of jurisdiction and affirming the District Court's order dissolving the preliminary injunction.

On April 6, 2006 the Company filed a lawsuit against Pall Corporation in the United States District Court for the District of Massachusetts alleging infringement of the Company's newly issued U.S. patent No. 7,021,667 by certain filter assembly products used in photolithography applications that are manufactured and sold by the defendant. The Company's lawsuit also seeks a preliminary injunction preventing the defendant from the manufacture, use, sale, offer for sale or importation into the U.S. of the infringing products. On October 23, 2006 the Company's motion for preliminary injunction was argued before the court. On March 31, 2008 the court issued an order denying the Company's motion for a preliminary injunction.

On August 23, 2006 the Company filed a lawsuit against Pall Corporation in the United States District Court for the District of Massachusetts alleging infringement of the Company's newly issued U.S. patent No. 7,037,424 by certain fluid separation modules and related separation apparatus, including the product known as the EZD-3 Filter Assembly, used in photolithography applications that are manufactured and sold by the defendant. It is believed that the EZD-3 Filter Assembly was introduced into the market by the defendant in response to the action brought by the Company in March of 2003 as described above. On May 5, 2008, the court issued an order consolidating this case with the two cases described in the preceding paragraphs for purposes of discovery; these cases are currently in the discovery stage.

As previously disclosed, on December 16, 2005 Pall Corporation filed suit against the Company in U.S. District Court for the Eastern District of New York alleging patent infringement. Specifically, the suit alleges infringement of two of plaintiff's patents by one of the Company's gas filtration products and by the packaging for certain of the Company's liquid filtration products. Both products and their predecessor products have been on the market for a number of years. The Company intends to vigorously defend this suit and believes that it will ultimately prevail. This case is currently awaiting a hearing before the court for claim construction of the patents in suit.

On May, 4, 2007 Pall Corporation filed a lawsuit against the Company in the U.S. District Court for the Eastern District of New York alleging patent infringement. Specifically, the suit alleges that certain of the Company's point-of-use filtration products infringe a newly issued Pall patent, as well as three older Pall patents. Pall's action, which relates only to the U.S., asserts that "on information and belief" the Company's Impact 2 and Impact Plus point-of-use photoresist filters infringe a patent issued to Pall on March 27, 2007, as well as three older patents. The Company intends to vigorously defend this suit and believes that it will ultimately prevail. This case is currently in the discovery stage.

(23) SUBSEQUENT EVENT

On March 2, 2009, the Company amended and restated its credit agreement (Amended Agreement) with Wells Fargo Bank, National Association, as agent, and certain other banks. The Amended Agreement provides for a maximum $150 million revolving credit facility maturing November 1, 2011. The Company's prior credit agreement provided for a $230 million revolving credit facility maturing February 15, 2013.

Under the terms of the Amended Agreement, the Company is initially limited to borrowings of $139 million. The remaining $11 million of the credit facility may not be borrowed unless a majority of the lenders consent. The ability to borrow under the credit facility is subject to a borrowing base composed of domestic eligible accounts receivable, inventory and fixed assets. The borrowing cap can be adjusted downward if the Company's levels of qualifying domestic accounts receivable, inventories and value of its property, plant and equipment were to decline from current levels.

The financial covenants in the Amended Agreement replace those in the prior credit agreement. The Amended Agreement requires that the Company achieve minimum year-to-date EBITDA (defined as net income plus certain items including, but not limited to, depreciation, amortization, share-based compensation expense, interest and income taxes) at prescribed levels. The minimum year-to-date EBITDA levels, measured on a year-to-date basis from January 2009 through March 2010, are indicated in the table below.

Period ending	*(In thousands)*
January 2009	$(16,000)
February 2009	(24,000)
March 2009	(31,000)
April 2009	(35,000)
May 2009	(42,000)
June 2009	(45,000)
July 2009	(53,000)
August 2009	(59,000)
September 2009	(62,000)
October 2009	(62,000)
November 2009	(62,000)
December 2009	(56,000)
January 2010	(3,000)
February 2010	2,000
March 2010	7,000

Under the terms of the Amended Agreement, the Company may elect that the loans comprising each borrowing bear interest at a rate per annum equal to either (a) the sum of 4.25% plus a base rate equal to the highest of: (i) the prime rate then in effect, (ii) the Federal Funds rate then in effect plus 1.25%, (iii) the one-month LIBOR rate then in effect plus 1.25% or (iv) 3.25%; or (b) the sum of 5.25% plus the greater of the LIBOR rate then in effect or 1.50%. These interest rates may be increased by 2.25% if the Company's EBITDA for the twelve-month period ending on the dates below is less than the minimum amount indicated in the table below:

Period ending	*(In thousands)*
July 2009	$(44,000)
August 2009	(47,000)
September 2009	(46,000)
October 2009	(46,000)
November 2009	(45,000)
December 2009	(39,000)

The Company’s borrowings are guaranteed by all its subsidiaries which are treated as domestic for tax purposes and secured by a first-priority security interest in all assets owned by the borrowers or such domestic guarantors, except that the collateral shall include only 65% of the voting stock owned by the borrowers or a domestic subsidiary of each subsidiary which is treated as foreign for tax purposes.

Voluntary prepayments and commitment reductions are permitted, in whole or in part, in minimum amounts without penalty, other than customary breakage costs with respect to LIBOR borrowings. Mandatory prepayments of the revolving loan, but not commitment reductions, must be made with the proceeds of asset sales, insurance and condemnation recoveries and certain extraordinary receipts.

At all times the borrowers and guarantors must maintain certain minimum cash and cash equivalents. The Amended Agreement also includes limitations on the amount of cash and cash equivalents of the Company and its foreign subsidiaries located outside the United States. Beginning in the second quarter of 2010, the foregoing minimum EBITDA covenants expire and the Amended Agreement requires that the Company maintain certain cash flow leverage and fixed charge coverage ratios.

In addition, the Amended Agreement includes negative covenants, subject to exceptions, restricting or limiting the Company’s ability and the ability of its subsidiaries to, among other things, sell assets; make capital expenditures; alter the business the Company conducts; engage in mergers, acquisitions and other business combinations; declare dividends or redeem or repurchase capital stock; incur, assume or permit to exist additional indebtedness or guarantees; make loans and investments; make acquisitions; incur liens; and enter into transactions with affiliates.

The Amended Agreement also contains customary provisions relating to representations and warranties, affirmative covenants and events of default, including payment defaults, breach of representations and warranties, covenant defaults, certain events of bankruptcy, certain events under ERISA, material judgments, cross defaults and change in control. If an event of default occurs, the lenders under the Amended Agreement would be entitled to take various actions, including ceasing to make further advances, accelerating the maturity of amounts outstanding under the Amended Agreement and all other remedial actions permitted to be taken by a secured creditor.

(24) QUARTERLY INFORMATION-UNAUDITED

(In thousands, except per share data)	Fiscal quarter ended			
	March 29, 2008	June 28, 2008	September 27, 2008	December 31, 2008
Net sales	$148,227	$147,947	$ 145,789	$ 112,736
Gross profit	63,988	59,887	55,398	32,242
Net income (loss) from continuing operations	3,208	5,525	(392,912)	(131,718)
Net (loss) income from discontinued operations	(343)	(592)	(90)	(80)
Net income (loss)	2,865	4,933	(393,002)	(131,798)
Basic earnings (loss) per share				
Continuing operations	0.03	0.05	(3.51)	(1.18)
Discontinued operations	0.00	(0.01)	(0.00)	0.00
Net income (loss)	0.03	0.04	(3.52)	(1.18)
Diluted earnings (loss) per share				
Continuing operations	0.03	0.05	(3.51)	(1.18)
Discontinued operations	(0.00)	(0.01)	(0.00)	0.00
Net income (loss)	0.02	0.04	(3.52)	(1.18)

(In thousands, except per share data)	Fiscal quarter ended			
	March 31, 2007	June 30, 2007	September 29, 2007	December 31, 2007
Net sales	$159,571	$153,508	$ 151,811	$ 161,348
Gross profit	68,508	65,494	65,510	66,725
Net income from continuing operations	10,494	15,750	8,953	11,159
Net loss from discontinued operations	(111)	(973)	(536)	(377)
Net income	10,383	14,777	8,417	10,782
Basic earnings (loss) per share				
Continuing operations	0.08	0.12	0.08	0.10
Discontinued operations	0.00	(0.01)	(0.00)	(0.00)
Net income	0.08	0.11	0.07	0.09
Diluted earnings (loss) per share				
Continuing operations	0.08	0.12	0.08	0.10
Discontinued operations	0.00	(0.01)	(0.00)	(0.00)
Net income	0.08	0.11	0.07	0.09