ENTEGRIS INC
Form 10-K
February 24, 2011

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

x **Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**
For the fiscal year ended December 31, 2010

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.)**

129 Concord Road, Billerica, Massachusetts 01821

(Address of principal executive offices and zip code)

(978) 436-6500

(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. x 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 x 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. x Yes ¨ No

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

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 x 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 x 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 July 2, 2010, the last business day of registrant s most recently completed second fiscal quarter, was $498,899,972. 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 February 15, 2011 133,255,562 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 worldwide developer, manufacturer and supplier of products and materials used in processing and manufacturing in the semiconductor and other high-technology industries. For the semiconductor industry, our products maintain the purity and integrity of critical materials used by the semiconductor manufacturing process. For other high-technology applications, our products and materials are used to manufacture flat panel displays, light emitting diodes or LEDs , high-purity chemicals, photoresists, fuel cells, solar cells, gas lasers, optical and magnetic storage devices, fiber optic cables and critical components for aerospace, glass manufacturing and biomedical applications. We sell our products worldwide through a direct sales force and through selected distributors.

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. 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 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 17,000 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 (CVD) 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 63%, 70% and 65% of our net sales for fiscal years 2010, 2009 and 2008, respectively, and capital expense-driven products accounted for approximately 37%, 30%, and 35% of our net sales for the fiscal years 2010, 2009 and 2008, 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 usage of and reliance on the Internet through expanding channels, and the continuing demand for applications in data processing, wireless communications, broadband infrastructure, personal computers, handheld electronic devices and other consumer electronics.

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, gases and metals are repeatedly applied to the silicon wafer to build the integrated circuits on the wafer surface. We offer products, such as liquid and gas filters and purifiers, fluid and gas handling components and wafer shippers and process carriers, to purify these materials and to support 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 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 filter 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. Our filtration and purification systems thus enable semiconductor manufacturers to maintain acceptable manufacturing yields through the chemical mechanical planarization process. 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 etched 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 micro-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 standard number of wafers that can be transported in one of our 200 mm and 300 mm 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 in order to improve time-to-market, reduce manufacturing costs, improve production quality and enhance product reliability. 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. Further processing wafers in higher manufacturing technology nodes, larger wafers and finer line widths is more costly and more complex than for smaller wafer sizes and larger line widths. In addition, new materials and circuit shrinkage create new contamination and material compatibility risks, rendering larger wafers more vulnerable to damage or contamination. We believe that these challenges provide opportunities for our advanced purification, dispense, shipping, transport, process and storage products and systems. We also seek to bring our advanced polymer manufacturing and advanced tool design capabilities to bear on these challenges to provide our customers with innovative materials-based solutions.

Many of the processes used to manufacture semiconductors are also used to manufacture photovoltaic cells, LEDs, flat panel displays and magnetic storage devices 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 leading global provider of 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 that 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 for below 32 nanometers; we have also developed next-generation 300 mm wafer handling products utilizing advanced materials and have been active in the development of products for handling 450 mm wafers. We have also 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 (OEMs) 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 opportunities.

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. The sale of our cleaning equipment business in 2008 is an example of this strategy. Finally, we are continuously evaluating opportunities for strategic alliances and joint development efforts with key customers and other industry leaders.

Our Segments

We design, manufacture and market our products through three segments: **(i)** our contamination control solutions segment, which offers a wide range of products that purify, monitor and deliver critical liquids and gases to the semiconductor manufacturing process and similar manufacturing processes, **(ii)** our microenvironments segment, which offers products to preserve the integrity of wafers, reticles and electronic components at various stages of transport, processing and storage and **(iii)** our specialty materials segment, which offers materials, components and services to a wide range of customers in the semiconductor industry and in adjacent and unrelated industries. Each segment has dedicated manufacturing resources, and is composed of several product-focused business units. Each product-focused business segment has its own dedicated marketing and engineering, research and development resources. There follows a detailed description of our three segments:

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 to prevent defects in the wafers that occur if these elements are 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.

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 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. In addition, we 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.

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 product line also includes filter housings and hybrid media chemical air filters which purify air entering exposure tool and process tool enclosures and remove airborne molecular contaminants.

MICROENVIRONMENTS

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

Wafer and Reticle Handling Products. We are a global producer of wafer and reticle 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 a spectrum of industry standards and customers wafer handling needs including front opening unified pods or FOUPs , wafer transport and process carriers, standard mechanical interface or 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.

We are also a global provider of mask and reticle handling products, including reticle SMIF pods for the protection of extremely valuable and contamination-sensitive lithography reticles. Through our Clarilite -branded product offerings, we are providing our customers with leading edge contamination control solutions.

Wafer Shipping Products. We are a global provider of critical shipping products that preserve the integrity of raw silicon wafers as they are transported from wafer manufacturers to semiconductor manufacturers or finished wafers shipped to back end processors. 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 currently offer outsourcing programs for wafer and device transportation and protection for both wafer manufacturing and wafer handling products. Our Wafercare® and DeviceCare℠ 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 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

Our specialty materials products fall into two sub-categories, Poco Graphite Products and Specialty Coating Products. 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 CVD, 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 materials to manufacturers of artificial heart valves for human implantation.

Specialty Coating Products. 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 proprietary low-temperature, plasma-assisted CVD process to provide corrosion and abrasion resistance and desired conductivity and hydrophobicity properties. We also provide complex assemblies such as electrostatic chucks for ion implant equipment, where our coatings prevent contamination of the process. Our coatings are also used in other high-technology applications such as aerospace optical components.

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, OEMs 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 2010 include leading device makers such as Samsung America Inc., ST Micro, Taiwan Semiconductor Manufacturing Co. Ltd. and UMC Group, leading OEM companies such as ASML and Tokyo Electron and leading wafer grower companies such as MEMC, Siltronic AG and SUMCO Oregon Corp. We also sell our products to flat panel display OEMs, 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 2010, 2009 and 2008, net sales to our top ten customers accounted for approximately 28%, 29% and 26%, 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% of our net sales each year. Over 3,200 customers purchased products from us during 2010.

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 and strategic distributors located in offices in all major semiconductor markets, as well as through independent distributors elsewhere. As of December 31, 2010, our sales and marketing force consisted of approximately 430 employees worldwide. Our direct sales force is also 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 OEMs 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 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 Mersen (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 2010, 2009 and 2008 were $43.9 million, $35.0 million and $40.1 million, respectively. As of December 31, 2010, we had approximately 195 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, Taiwan 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, 32 nanometer and smaller 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. For example, we have participated with SEMI to develop specifications and with a major customer to develop wafer handling products for 450mm wafers. 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, Malaysia and South Korea. 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

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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 tool development staff in the United States and Malaysia and have tool-making capabilities in 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 January 20, 2011 our patent portfolio included 287 current U.S. patents, 593 current foreign patents, including counterparts to U.S. filings, 50 pending U.S. patent applications, 11 pending filings under the Patent Cooperation Treaty not yet nationalized and 458 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.

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 18, 2011, we had approximately 2,600 full-time employees, as well as approximately 375 temporary employees. Approximately 200 of our full-time employees work in engineering, research and development and approximately 425 work in sales and marketing. 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 certain European countries.

Information about our Operating Segments

Our financial reporting segments are Contamination Control Solutions (CCS), Microenvironments (ME), and Specialty Materials (SMD). In 2010, 2009, and 2008 approximately 71% of our net sales were made to customers outside North America. Industry and geographic segment information is discussed in Note 20 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 and authorized the

issuance of Rights in connection with future issuances of Entegris common stock. 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 certain filtration membranes used by our Contamination Control Solutions segment, polymer resins used by our Microenvironments segment and petroleum coke used by our Specialty Materials segment 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, 2010, of our Executive Officers. All of the Corporate Officers listed below were elected to serve until the first Directors Meeting following the 2011 Annual Stockholders Meeting. All of the Other Executive Officers Listed below were appointed to their current positions by Corporate Officers.

Name	Age	Office	First Appointed To Office*
CORPORATE OFFICERS			
Gideon Argov	54	*President & Chief Executive Officer*	2004
Gregory B. Graves	50	*Executive Vice President, Chief Financial Officer & Treasurer*	2002
Bertrand Loy	45	*Executive Vice President & Chief Operating Officer*	2001
Peter W. Walcott	64	*Senior Vice President, Secretary & General Counsel*	2001
John J. Murphy	58	*Senior Vice President, Human Resources*	2005
OTHER EXECUTIVE OFFICERS			
Lynn L. Blake	44	*Vice President of Finance, Chief Accounting Officer*	2007
Todd Edlund	48	*Vice President, General Manager, Contamination Control Solutions Division*	2007
Gregory C. Morris	53	*Vice President, Global Sales*	2008
William Shaner	43	*Vice President, General Manager, Microenvironments Division*	2007

* 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. and X-Rite Incorporated.

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 Corporation 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. Mr. Loy serves on the board of BTU International, Inc., a publicly held supplier of advanced thermal processing equipment.

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 Corporation 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.

Lynn L. Blake has been our Vice President of Finance and Chief Accounting Officer since June of 2007. Prior to that time she served as Corporate Controller at MTS Systems Corporation, a global manufacturing company specializing in advanced engineering systems for mechanical testing applications, from 2002 to 2007. Prior to 2002, Lynn held a variety of finance and accounting management positions at companies including Carlson Companies, Gartner Institute, Cowles Media Corporation, and Honeywell International, Inc.

Todd Edlund has been Vice President and General Manager of our Contamination Control Solutions Division since December 2007. He served as the Vice President and General Manager of our Liquid Systems Business Unit from 2005 to 2007, and prior to that as Entegris Minnesota s Vice President of Sales for semiconductor markets from 2003 to 2005. Prior to 2003, Mr. Edlund held a variety of positions with our predecessor companies since 1995.

Gregory C. Morris has been Vice President, General Manager, Global Field Operations since 2008. Prior to that time, Mr. Morris was our North American Regional Sales Director since 2007, and the head of our Finished Electronics Products group from 2005 until 2007. Mr. Morris was President of the Entegris Minnesota Data Storage Business Unit from 2003-2005. From 2000 to 2003 Mr. Morris acted as General Manager of a wholly-owned subsidiary Entegris Minnesota. Prior to 2000, Mr. Morris held a variety of positions with our predecessor companies since 1992.

William Shaner has been our Vice President and General Manager, Microenvironments Division since 2007. He has served in a variety of sales, marketing, business development and engineering roles since joining Entegris in 1995.

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 semiconductor industry has historically been highly cyclical, and industry downturns reduce net sales 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 significant downturns, which often have resulted in significantly decreased expenditures by semiconductor manufacturers. Even moderate cyclicality can cause our operating results to fluctuate significantly from one period to the next. We experienced 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 future downturns 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 any significant increases in demand, if they occur. 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 stock price to decline significantly. 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 any such increase in demand.

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

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 and instead may reflect a lower rate of long-term growth.

There may not be new high-opportunity applications to drive growth in the semiconductor industry, as was the case in earlier market cycles. Accordingly, the semiconductor industry may experience lower growth rates during

any recovery cycle than has historically been the case and its longer-term performance may reflect this lower growth rate. We are unable to predict the duration or ultimate severity of any 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 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.

Our sales are somewhat concentrated on a small number of key customers and, therefore, our net sales and profitability may materially decline if one or more of our key customers does 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 28%, 29%, and 26%, of our net sales in 2010, 2009 and 2008, respectively. If any one of our key customers decides to purchase significantly less from us or to terminate its relationship with us, our net sales 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 or are acquired, we may experience lower overall sales from the merged or surviving 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.

We are subject to order and shipment uncertainties and many of our costs are fixed, and, therefore, any significant changes, cancellations or deferrals of orders or shipments could cause our net sales and profitability to decline or fluctuate.

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 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 OEMs 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 cancellation, which could have a material adverse effect on our results of operations.

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

The broad adoption 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 in our 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. Sales of our shipping products for these applications has to date and could continue in the future be modest 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, require us to incur 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 would consider a variety of financing alternatives for each acquisition which could include borrowing funds, reducing our cash balances or issuing 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.

We may not effectively penetrate new markets.

Part of our business strategy is to leverage our expertise in our core competencies for growth in new and adjacent markets, such as photovoltaic cells, LEDs, flat panel displays, lithium ion batteries and magnetic storage devices. Our ability to grow our business could be limited if we are unable to execute on this strategy.

If we do not generate sufficient cash, our ability to operate may be impeded.

If the Company s future financial performance fails to generate sufficient cash to meet our working capital needs, then we will have to take significant further measures to reduce net cash expenditures. If we are unable to generate sufficient cash by these means, we may be required to draw on our credit facility, seek debt or equity financing or sell assets in order to have sufficient liquidity to meet our obligations or for our operations. We cannot assure you that we will be able to raise additional funds in a timely manner, on reasonable terms, or at all.

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 source with our customers. If we are unable to obtain an adequate quantity of such supplies for any reason, our manufacturing operations may be adversely 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 sources are limited and our 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.

Our membrane manufacturing operations may be disrupted if we are unable to successfully transition manufacturing to our own facility.

The Fourth Amended and Restated Membrane Manufacturing Agreement (the Membrane Agreement) between us and Millipore Corporation, dated January 10, 2011, provides that our lease of space in Millipore s Bedford, Massachusetts facility and our right to use certain manufacturing equipment owned by Millipore expires on March 31, 2014. Securing and outfitting a replacement membrane manufacturing plant will require significant lead time and capital investment. In addition, the transition of membrane manufacturing operations to a new facility will be complex and time consuming. A failure to execute the transition effectively and expeditiously 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 $43.9 million, $35.0 million and $40.1 million of engineering, research and development expense in

2010, 2009 and 2008, 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, if ever. 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 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 non-U.S. 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 certain of our plants. For example, in the fourth quarter of 2009 we completed 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 establish stable processes to efficiently and effectively produce high quality products in 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 may cause us to lose credibility with our customers and harm our business. There can be no assurance that these complex manufacturing processes can be stabilized and that the cost savings that we anticipate will be achieved.

Loss of our key personnel could harm 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 we have, had to impose salary reductions on senior employees and freeze or eliminate merit increases in an effort to maintain our 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.

We face the risk of product liability claims.

The manufacture and sale of our products involve the risk of product liability claims. In addition, a failure of one of our products at a customer site could interrupt the business operations of the customer. Our existing insurance coverage limits may not be adequate to protect us from all liabilities that we might incur in connection with the manufacture and sale of our products if a successful product liability claim or series of product liability claims were brought against us.

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 recently settled multiple patent litigations with Pall Corporation. We prosecuted and defended these cases vigorously and incurred substantial costs in pursuing them. 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. We cannot predict how any existing or future litigation will be resolved or what their impact will be on us.

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 2010, 2009 and 2008. 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 South Korea, Taiwan and Japan, have been negatively impacted in the past as a result of regional economic instability. In addition, Taiwan and South 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 a number of foreign countries, some companies engage in business practices that are prohibited by U.S. 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 U.S. laws may be customary or common, 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 and results of operations.

We will lose sales if we are unable to obtain government authorization to export certain of our products, and we would be subject to legal and regulatory consequences if we do not comply with applicable export control laws and regulations.

Exports of certain of our products are subject to export controls imposed by the U.S. Government and administered by the U.S. Departments of State and Commerce. In certain instances, these regulations may require pre-shipment authorization from the administering department. For products subject to the Export Administration Regulations, or EAR, administered by the Department of Commerce s Bureau of Industry and Security, or BIS, the requirement for a license is dependent on the type and end use of the product, the final destination, the identity of the end user and whether a license exception might apply. Virtually all exports of products subject to

the International Traffic in Arms Regulations, or ITAR, administered by the Department of State s Directorate of Defense Trade Controls, require a license. Certain of our products are subject to EAR and certain of our future products being developed with government funding, may be subject to ITAR. Products developed and manufactured in our foreign locations are subject to export controls of the applicable foreign nation.

Given the current global political climate, obtaining export licenses can be difficult and time-consuming. Failure to obtain export licenses for these shipments could significantly reduce our revenue and materially adversely affect our business, financial condition and results of operations. Compliance with U.S. Government regulations may also subject us to additional fees and costs. The absence of comparable restrictions on competitors in other countries may adversely affect our competitive position.

Our results of operations could be adversely affected by changes in taxation.

We have facilities in foreign countries and, as a result, are subject to taxation and audit by a number of taxing authorities. Tax rates vary among the jurisdictions in which we operate. Our results of operations could be affected by market opportunities or decisions we make that cause us to increase or decrease operations in one or more countries, or by changes in applicable tax rates or audits by the taxing authorities in countries in which we operate. In addition, we are subject to laws and regulations in various locations that govern the determination of which is the appropriate jurisdiction to decide when and how much profit has been earned and is subject to taxation in that jurisdiction. Changes in these laws and regulations could affect the locations where we are deemed to earn income, which could in turn affect our results of operations. We have deferred tax assets on our balance sheet. Changes in applicable tax laws and regulations could affect our ability to realize those deferred tax assets, which could also affect our results of operations. Each quarter we forecast our tax liability based on our forecast of our performance for the year. If that performance forecast changes, our forecasted tax liability may change.

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.

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

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 United States or those other countries, and these additional costs may be substantial and may put our products at a competitive disadvantage.

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 years, including, among other things, volatility in securities prices, severely diminished liquidity and credit availability, rating downgrades of certain investments and declining valuation of others, declines in consumer

confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. These conditions have had a significant adverse impact on our industry and financial condition and results of operations. There may be further change in the global economy, which could lead to further challenges in our business and negatively impact our financial results. The current tightness 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 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. If the current uncertain economic conditions continue or further deteriorate, our business and results of operations could be further materially and adversely affected.

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 raw silicon 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 leverage our local manufacturing capability and increase market share in Japan, we may not be able to maintain our global market share in wafer shipper products, especially if 300 mm wafer manufacturing in Japan continues to increase.

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 any security we issue. There can be no assurance that there will not be future terrorist attacks against the United States or U.S. businesses. These attacks or other 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, South Korea 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 any security we issue.

Risks Related to Owning our Securities

The price of our common stock has been volatile in the past and may be volatile in the future.

The price of our common stock has been volatile in the past and may be volatile in the future. For example, in fiscal year 2010, the closing price of our stock on The NASDAQ Global Select Market (NASDAQ) ranged from a low of $3.64 to a high of $7.70 and in fiscal year 2009, the closing price of our stock on NASDAQ ranged from a low of $0.52 to a high of $5.62.

The trading price of our common stock is subject to significant volatility in response to various factors, some of which are beyond our control 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; the cyclicality of the semiconductor industry and current industry downturn; our performance; our ability to repay when due any debt obligations we may incur in the future; our ability to respond to rapid shifts in demand; our ability to compete effectively; loss of key customers or decline in order volumes for new and existing products; our high fixed costs; manufacturing difficulties; risks associated with our significant foreign operations; additions or departures of key personnel; involvement in or adverse results from litigation; and perceived dilution from stock issuances.

Furthermore, stock prices for many companies fluctuate widely for reasons that may be unrelated to their operating results. Those fluctuations and general economic, political and market conditions, such as recessions, terrorist or other military actions, or international currency fluctuations, as well as public perception of equity values of publicly traded companies may adversely affect the market price of our common stock. These market fluctuations may cause the trading price of our common stock to decrease. Future decreases in our stock price may adversely impact our ability to raise sufficient additional capital in the future, if needed.

If our common stock trades below book value and the business outlook worsens, we could be required to record material impairment losses for our long-lived assets, including property, plant and equipment and our identifiable intangibles.

In accordance with U.S. generally accepted accounting principles, we review our 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 undiscounted cash flows, the asset will be written down to its fair value. As a result of the company experiencing a sustained and significant decline in its stock price and a significant decline in the current and forecasted business levels during the third and fourth quarters of fiscal year 2008 and first quarter of fiscal year 2009, we reviewed the value of our long-lived assets and determined that none of our long-lived assets were impaired. The determination was based on reviewing estimated undiscounted cash flows for our asset groups, all of which were greater than their carrying values. As required under U.S. generally accepted accounting principles, the long lives asset impairment analyses occurred before the company s goodwill impairment assessments.

The evaluation of the recoverability of long-lived assets requires us 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 our market capitalization and the uncertain economic environment within the semiconductor industry, we 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 we may no longer be able to conclude that there is no impairment of our long-lived assets, nor can we provide assurance that material impairment charges of long-lived assets will not occur in future periods. For example, our assessment of goodwill for impairment during the second half of 2008 resulted in a determination that the carrying value of our goodwill as of August 31, 2008 (our annual impairment test date) and, due to events and circumstances, through the end of the third and fourth quarters of the year ended December 31, 2008 exceeded its fair value. During the third quarter of 2008 we wrote off $379.8 million of goodwill and at the end of the year we wrote off the remaining goodwill of $94.0 million.

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

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 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 our annual or interim financial statements would not have been prevented or detected. In addition, we restated our interim financial statements for the first quarter on 2008 as a result of two significant deficiencies we identified which aggregated to a material weakness. None of the material weaknesses in 2006 or 2007 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.

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 may make it more difficult and more expensive for us to obtain director and officer liability insurance in the future, 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.

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 restated certificate of incorporation makes us subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits publicly held Delaware corporations to which it applies from engaging in a business combination with an interested stockholder for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. This provision could discourage others from bidding for our shares of common stock and could, as a result, reduce the likelihood of an increase in the price of our common stock that would otherwise occur if a bidder sought to buy our common stock.

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 decline.

Our certificate of incorporation authorizes the issuance of shares of blank check preferred stock.

Our certificate of incorporation provides that our board of directors is authorized to issue from time to time, without further stockholder approval, up to 5,000,000 shares of preferred stock in one or more series and to fix and designate the rights, preferences, privileges and restrictions of the preferred stock, including dividend rights, conversion rights, voting rights, redemption rights and terms of redemption and liquidation preferences. Such shares of preferred stock could have preferences over our common stock with respect to dividends and liquidation rights. Our issuance of preferred stock may have the effect of delaying or preventing a change in control. Our issuance of preferred stock could decrease the amount of earnings and assets available for distribution to the holders of common stock or could adversely affect the rights and powers, including voting rights, of the holders of common stock. The issuance of preferred stock could have the effect of decreasing the market price of our common stock.

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.

We do not intend to pay dividends or other distributions to our stockholders.

We currently do not, and do not intend to, pay cash dividends on our common stock in the foreseeable future. Furthermore, our Restated Credit Agreement contains restrictions that limit our ability to pay dividends. We expect that we will retain all available earnings generated by our operations for business operations and potential future debt service.

Item 1B. Unresolved Staff Comments.
Not Applicable.

Item 2. Properties.
Our principal executive offices are located in Billerica, Massachusetts. 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
Billerica, Massachusetts	Executive Offices, Research & Manufacturing[1]	175,000	Leased[2]
Chaska, Minnesota	Executive Offices, Research & Manufacturing[1] [3]	192,000	Owned
Colorado Springs, Colorado	Manufacturing[3]	82,000	Owned
Decatur, Texas	Manufacturing[4]	359,000	Owned
Montpellier, France	Cleaning Services[3]	53,000	Owned
Yonezawa, Japan	Manufacturing[1] [3]	196,000	Owned
Kulim, Malaysia	Manufacturing[1] [3]	195,000	Owned

1. Facility used by our Contamination Control Solutions Division.
2. This lease expires March 31, 2014, but is subject to two five-year renewal options.
3. Facility used by our Microenvironments Division.
4. Facility used by our Specialty Materials Division.

We lease approximately 4,200 square feet of manufacturing space in a facility located at 80 Ashby Road, Bedford, Massachusetts owned by Millipore Corporation pursuant to a Fourth Amended and Restated Membrane Manufacturing and Supply Agreement that expires December 31, 2014. We also lease approximately 13,000 square feet of research and development and manufacturing office space 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 12,000 square feet of office, research and development and manufacturing space in three 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, 2011.

We maintain a worldwide network of sales, service, repair and cleaning centers in the United States, Germany, France, Japan, Taiwan, Singapore, China and South 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. In addition, one of our subsidiaries owns an approximately 40,000 square foot facility near Seoul, South Korea which is used for manufacturing, research and development by our Contamination Control Solutions Division.

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. In addition to our operating facilities, our former headquarters building in Chaska, Minnesota is unoccupied and held for sale.

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, 2010.

As previously disclosed: (i) 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 Pall Corporation; (ii) on December 16, 2005 Pall Corporation filed a lawsuit against the Company in U.S. District Court for the Eastern District of New York alleging 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; (iii) on April 6, 2006 the Company filed a second 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 Pall; (iv) on August 23, 2006 the Company filed a third 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 Pall; and (v) on May, 4, 2007 Pall Corporation filed a second lawsuit against the Company in the U.S. District Court for the Eastern District of New York alleging that certain of the Company s point-of-use filtration products infringe a newly issued Pall patent, as well as three older Pall patents.

In each of the above lawsuits the plaintiff sought damages and/or injunctive relief against the alleged infringement.

On January 13, 2011 the Company and Pall Corporation entered into a Release, Settlement and License Agreement that effects a comprehensive settlement of all of the above patent infringement litigation pending between the companies. Among other things the terms of this settlement permits both companies to continue to manufacture their existing product lines. In accordance with the terms of this settlement, a stipulation and proposed order of dismissal was filed with the appropriate court for each of the above lawsuits within 5 days following the above settlement date.

Item 4. (Removed and Reserved).

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 under the symbol ENTG . The following table sets forth the highest and lowest sale prices of the Company shares during fiscal 2010 and 2009. As of February 10, 2011 there were 1,371 shareholders of record.

	Fiscal 2010		Fiscal 2009	
	Low	High	Low	High
First quarter	$ 3.61	$ 5.45	$ 0.50	$ 2.55
Second quarter	$ 3.69	$ 6.83	$ 0.85	$ 3.43
Third quarter	$ 3.72	$ 5.15	$ 2.53	$ 4.56
Fourth quarter	$ 4.53	$ 7.73	$ 3.55	$ 5.75

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 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.

Equity Compensation Plan Information

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (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	4,678,298	$ 6.10	9,493,969
Equity compensation plans not approved by security holders	322,480	$ 8.42	N/A
Total	5,000,778	$ 6.25	9,493,969

Comparative Stock Performance

The following graph compares the cumulative total shareholder return on the common stock of Entegris, Inc. from August 26, 2005 through December 31, 2010 with cumulative total return of (1) The NASDAQ Composite Index (NASDAQ), and (2) The Philadelphia Semiconductor Index, assuming $100 was invested at the close of trading August 26, 2005 in Entegris, Inc. common stock, the NASDAQ Composite Index and the Philadelphia Semiconductor Index and that all dividends are reinvested.

	August 26, 2005	December 31, 2005	December 31, 2006	December 31, 2007	December 31, 2008	December 31, 2009	December 31, 2010
Entegris, Inc.	$ 100.00	$ 91.10	$ 104.64	$ 83.46	$ 21.18	$ 51.05	$ 72.22
NASDAQ Composite	$ 100.00	$ 103.85	$ 114.65	$ 130.55	$ 78.38	$ 113.93	$ 134.61
Phila. Semi. Index	$ 100.00	$ 103.47	$ 101.68	$ 89.47	$ 47.24	$ 81.50	$ 115.54

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 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.

(In thousands, except per share amounts)	Year ended December 31, 2010	Year ended December 31, 2009	Year ended December 31, 2008	Year ended December 31, 2007	Year ended December 31, 2006
Operating Results					
Net sales	$ 688,416	$ 398,644	$ 554,699	$ 626,238	$ 672,882
Gross profit	310,643	137,812	211,515	266,237	305,078
Selling, general and administrative expenses	147,051	117,001	147,531	163,918	170,702
Engineering, research and development expenses	43,934	35,039	40,086	39,727	38,074
Amortization of intangible assets	13,231	19,237	19,585	18,874	17,609
Impairment of goodwill			473,799		
Restructuring charges		15,463	10,423		
Operating profit (loss)	106,427	(48,928)	(479,909)	43,718	78,693
Income (loss) before income taxes and equity in affiliate earnings	101,481	(59,888)	(496,413)	56,619	89,556
Income tax expense (benefit)	15,006	(2,996)	19,201	10,356	26,936
Income (loss) from continuing operations	85,122	(57,759)	(515,897)	46,356	63,151
Net income (loss) attributable to Entegris, Inc.	84,356	(57,721)	(517,002)	44,359	63,466
Earnings Per Share Data					
Diluted earnings (loss) per share continuing operations	$ 0.63	$ (0.49)	$ (4.58)	$ 0.37	$ 0.45
Weighted average shares outstanding diluted	133,174	117,321	112,653	126,258	138,872
Operating Ratios % of net sales					
Gross profit	45.1%	34.6%	38.1%	42.5%	45.3%
Selling, general and administrative expenses	21.4	29.3	26.6	26.2	25.4
Engineering, research and development expenses	6.4	8.8	7.2	6.3	5.7
Amortization of intangible assets	1.9	4.8	3.5	3.0	2.6
Impairment of goodwill			85.4		
Restructuring charges		3.9	1.9		
Operating profit (loss)	15.5	(12.3)	(86.5)	7.0	11.7
Income (loss) before income taxes and equity in affiliate earnings	14.7	(15.0)	(89.5)	9.0	13.3
Effective tax rate	14.8	5.0	(3.9)	18.3	30.1
Net income (loss) attributable to Entegris, Inc.	12.3	(14.5)	(93.2)	7.1	9.4
Cash Flow Statement Data					
Depreciation and amortization	$ 41,198	$ 50,127	$ 46,343	$ 43,776	$ 42,905
Capital expenditures	16,794	13,162	26,987	26,919	30,860
Net cash provided by operating activities	140,898	4,193	66,260	132,017	96,076
Net cash (used in) provided by investing activities	(11,985)	(9,843)	(199,921)	50,800	(17,370)
Net cash (used in) provided by financing activities	(65,709)	(40,690)	82,681	(183,061)	(80,037)
Balance Sheet and Other Data					
Current assets	$ 387,091	$ 267,458	$ 313,128	$ 382,621	$ 556,321
Current liabilities	107,634	73,910	79,356	125,749	92,699
Working capital	279,457	193,548	233,772	256,872	463,622
Current ratio	3.60	3.62	3.95	3.04	6.00
Long-term debt		52,492	150,516	20,373	2,995
Shareholders equity	459,619	346,192	336,170	852,309	1,015,980

Total assets	601,385	504,672	597,824	1,035,241	1,157,618
Return on average shareholders equity %	20.9%	(16.9)%	(87.0)%	4.7%	6.3%
Shares outstanding at end of period	132,901	130,043	113,102	115,356	132,771

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

The following discussion and analysis of the Company s consolidated financial condition and results of operations should be read along 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 detailed discussion and analysis that follows and 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 related industries. The Company s customers consist primarily of semiconductor manufacturers, semiconductor equipment and materials suppliers as well as thin film transistor-liquid crystal display 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 17,000 standard and customized products that it believes provide the most comprehensive offering of contamination control solutions and microenvironment 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 products 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. The Company s capital expense-driven products include 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 process carriers that protect the integrity of in-process wafers.

Forward-Looking Statements

The information in this Management s Discussion and Analysis of Financial Condition and Results of Operations, except for the historical information, contains forward-looking statements. These statements are subject to risks and uncertainties and to the cautionary statement set forth below. These forward-looking statements could differ materially from actual results. The Company assumes no obligation to publicly release the results of any revision or updates to these forward-looking statements to reflect future events or unanticipated occurrences. This discussion and analysis should be read in conjunction with the consolidated financial statements and the related notes thereto, which are included elsewhere in this report.

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 significant 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 and foreign currency fluctuations.

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, 2010

The Company s financial results for the year ended December 31, 2010 reflected the continuation of the recovery from the global economic recession and, more specifically, the severe downturn in both the capital and unit-driven segments of the semiconductor industry that began during the second half of the year ended December 31, 2008.

The Company s business downturn reached a trough during the first quarter of 2009. In the second quarter of 2009, the Company began to experience an upturn in bookings and sales of certain of its unit-driven, consumable products and recovery of the Company s capital-driven product lines began in the third quarter. From a low point of $59.0 million in the first quarter of 2009, sales of the Company s products and services rose steadily to $82.6 million, $110.7 million and $146.3 million in the second, third and fourth quarters of 2009, respectively. Quarterly sales increased to $160.5 million, $167.6 million, $178.2 million and $182.1 million in 2010.

Total net sales for the year ended December 31, 2010 were $688.4 million, up $289.8 million, or 73%, from sales of $398.6 million for the year ended December 31, 2009. Sales growth in 2010 reflected continued positive trends in the Company s core semiconductor markets. Each of the Company s three operating segments experienced significant net sales increases.

The sales increase in 2010 included favorable foreign currency translation effects of $18.4 million related to the year-over-year strengthening of most international currencies versus the U.S. dollar, most notably the Japanese yen, Korean won, Singaporean dollar and Taiwanese dollar, offset partly by a weaker Euro. The sales increase for 2010 also included sales of $6.1 million from the Company s Pureline subsidiary, which was acquired in July 2009. Excluding these factors, net sales rose approximately 67% in 2010 when compared to 2009.

The Company reported considerably higher gross profit and an improved gross margin for 2010 compared to 2009. The gross margin rate for 2010 was 45.1% compared to 34.6% for 2009, mainly reflecting the significant year-over-year sales increase and the associated improvement in factory utilization.

The Company had higher year-over-year selling, general and administrative (SG&A) and engineering, research and development (ER&D) costs for the year ended December 31, 2010 when compared to a year ago, primarily due to increased employee-related costs related to higher incentive costs and the absence of the temporary pay reductions and unpaid furloughs put in place in 2009 as temporary cost-saving measures.

As a result of the factors noted above, net earnings attributable to the Company were $84.4 million, or $0.63 per diluted share, for 2010 compared to a net loss attributable to the Company of $57.7 million, or $0.49 per diluted share, in 2009.

During 2010, the Company amended its revolving credit facility agreement. The amendments reduced the revolving credit commitment from $121.7 million to $60.0 million. In addition, the amendments provided greater flexibility for certain thresholds related to the Company s capital expenditures and cash management covenants. The amendments did not change the cash flow leverage ratio or fixed charge coverage ratio covenants included in the terms of the revolving credit facility. As of December 31, 2010, the Company had no outstanding borrowings under the revolving credit facility and was in compliance with all applicable debt covenants included in the terms of the revolving credit facility. See note 10 to the Company s consolidated financial statements for additional detail.

During 2010, the Company s operating activities provided cash flow of $140.9 million, allowing the Company to reduce its outstanding debt by $71.8 million. Cash and cash equivalents were $134.0 million at December 31, 2010 compared with $68.7 million at December 31, 2009. The Company had no outstanding short-term bank borrowings or long-term debt at December 31, 2010 compared with debt of $71.8 million at December 31, 2009.

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, 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.

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. If management made different judgments or utilized different estimates, this could result in material differences in the amount and timing of the Company s results of operations for any period. 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, historical bad debt write-off experience and current economic circumstances when determining its allowance for doubtful accounts. The Company s allowance for doubtful accounts was $1.1 million and $1.7 million at December 31, 2010 and 2009, respectively.

An allowance for sales returns and allowances is established based on historical and current trends in product returns. At December 31, 2010 and 2009, the Company s reserve for sales returns and allowances was $1.0 million and $0.9 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. The Company evaluates its ending inventories for obsolescence and excess quantities each quarter. 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 $6.4 million and $9.1 million at December 31, 2010 and 2009, 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 or the Company s planned outlook for improved sales levels, 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 Long-Lived Assets As of December 31, 2010, the Company had $126.7 million of net property, plant and equipment and $65.1 million of net intangible assets. The Company routinely considers whether indicators of impairment of the value of its long-lived assets, particularly its manufacturing equipment, and its intangible assets, are present. A long-lived asset (asset group) shall be tested for recoverability whenever events or changes in circumstances (triggering events) indicate that its carrying amount may not be recoverable. The following are examples of such events or changes in circumstances:

a. A significant decrease in the market price of a long-lived asset (asset group)

b. A significant adverse change in the extent or manner in which a long-lived asset (asset group) is being used or in its physical condition

c. A significant adverse change in legal factors or in the business climate that could affect the value of a long-lived asset (asset group), including an adverse action or assessment by a regulator

d. An accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of a long-lived asset (asset group)

e. A current-period operating or cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset (asset group)

f. A current expectation that, more likely than not, a long-lived asset (asset group) will be sold or otherwise disposed of significantly before the end of its previously estimated useful life.

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 its 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 fair value 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 or amortized over the remaining estimated useful life of the assets.

The Company s long-lived assets are grouped with other assets and liabilities at the lowest level (asset groups) for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. The Company has four significant asset groups, identified by assessing the Company s identifiable cash flows and the interdependence of such cash flows: Contamination Control Solutions (CCS), Micro Environments (ME), Poco Graphite (POCO) and Entegris Specialty Coatings (ESC).

As described above, 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 and costs, 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, 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.

In connection with triggering events during the third and fourth quarters of 2008 and the first quarter of 2009, 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.

Based on improved economic conditions within the semiconductor industry and the absence of any other triggering events, the Company has not been required to perform impairment testing for any of its asset groups since the first quarter of 2009.

The Company will continue to monitor circumstances and events to determine whether 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.

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 sheets.

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 considers the positive and negative evidence for the potential utilization of its deferred tax assets. When management concludes that it is not more likely than not that the Company will realize certain deferred tax assets in the future, it records a valuation allowance for the portion of deferred tax assets management concluded will not be utilized.

The Company had a U.S. net deferred tax asset position of $44.4 million and $57.2 million at December 31, 2010 and 2009, respectively, which comprises temporary differences and various credit carryforwards. Management has reviewed its U.S. deferred tax assets and has concluded that it is not more likely than not that the Company will realize certain net deferred tax assets.

The negative evidence of a cumulative three-year U.S. operating loss and a finite carryforward period for the Company s U.S. foreign tax credits was sufficiently significant to outweigh all identified positive evidence. Accordingly, the Company maintained valuation allowances of $43.5 million and $57.2 million as of December 31, 2010 and 2009, respectively, with respect to net U.S. deferred tax assets.

The Company had net non-U.S. deferred tax asset positions before valuation allowance of $15.4 million and $14.9 million as of December 31, 2010 and 2009, respectively. At those dates, management determined that based upon the available evidence, a valuation allowance was required against non-U.S. deferred tax assets in certain tax jurisdictions. Accordingly, the Company maintained valuation allowances of $0.5 million and $0.4 million as of December 31, 2010 and 2009, respectively, with respect to certain non-U.S. deferred tax assets. For other non-U.S. jurisdictions, principally Japan, management believes that it is more likely than not that the net deferred tax assets will be realized as management expects sufficient future earnings in those jurisdictions.

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, 2010 and 2009, the Company s accrual for estimated future warranty costs was $1.0 million and $0.9 million, respectively.

Share-Based Compensation U.S generally accepted accounting principles require the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors based on estimated fair values. 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 the expected stock price volatility over the expected 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 is recorded net of estimated forfeitures. Forfeitures are required 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 and current expectations.

If the above factors change, and the Company uses different assumptions in future periods, the share-based compensation expense recorded may differ significantly from what was recorded in the current period.

Results of Operations

Year ended December 31, 2010 compared to year ended December 31, 2009

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, 2010 and 2009. 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)	2010		2009	
		% of net sales		% of net sales
Net sales	$ 688,416	100.0%	$ 398,644	100.0%
Cost of sales	377,773	54.9	260,832	65.4
Gross profit	310,643	45.1	137,812	34.6
Selling, general and administrative expenses	147,051	21.4	117,001	29.3
Engineering, research and development expenses	43,934	6.4	35,039	8.8
Amortization of intangible assets	13,231	1.9	19,237	4.8
Impairment of goodwill				
Restructuring charges			15,463	3.9
Operating income (loss)	106,427	15.5	(48,928)	(12.3)
Interest expense, net	3,516	0.5	9,215	2.3
Other expense, net	1,430	0.2	1,745	0.4
Income (loss) before income taxes and equity in net loss of affiliates	101,481	14.7	(59,888)	(15.0)
Income tax (benefit) expense	15,006	2.2	(2,996)	(0.8)
Equity in net loss of affiliates	1,353	0.2	867	0.2
Income (loss) from continuing operations	$ 85,122	12.4	$ (57,759)	(14.5)

Net sales For the year ended December 31, 2010, net sales were $688.4 million, up $289.8 million, or 73%, from sales for the year ended December 31, 2009. The Company s financial results for 2010 reflected the continuation of the recovery from the global economic recession and, more specifically, the severe downturn in both the capital and unit-driven segments of the semiconductor industry that began during the second half of the year ended December 31, 2008.

The Company s business downturn reached a trough during the first quarter of 2009. In the second quarter of 2009, the Company began to experience an upturn in bookings and sales of certain of its unit-driven, consumable products and recovery of the Company s capital-driven product lines began in the third quarter. From a low point of $59.0 million in the first quarter of 2009, sales of the Company s products and services rose steadily to $82.6 million, $110.7 million and $146.3 million in the second, third and fourth quarters of 2009, respectively. Quarterly sales increased to $160.5 million, $167.6 million, $178.2 million and $182.1 million in 2010.

Sales growth in 2010 reflected continued positive trends in the Company s core semiconductor markets. Each of the Company s three operating segments experienced significant net sales increases. See the Segment analysis included below in this section for additional detail.

The 2010 sales included favorable foreign currency translation effects of $18.4 million compared to 2009. This impact related to the year-over-year strengthening of most international currencies versus the U.S. dollar, most notably the Japanese yen, Korean won, Singaporean dollar and Taiwanese dollar, offset partly by a weaker Euro. The sales increase for 2010 also reflected the full-year inclusion of incremental sales of $6.1 million of the Company s Pureline subsidiary, which was acquired in July 2009. Excluding these factors, net sales rose approximately 67% in 2010 when compared to 2009.

Total sales to North America were 29%, Asia Pacific 39%, Europe 14% and Japan 18% in 2010. On a geographic basis, total sales North America were 29%, Asia Pacific 36%, Europe 16% and Japan 19% in 2009. When comparing 2010 to 2009, all regions experienced significant year-over-year sales increases. Net sales to customers in North America, Asia, Europe, and Japan increased 68%, 89%, 54%, and 69%, respectively. A portion of the Asia and Japan increases related to favorable foreign currency translation effects. Net of favorable currency translation effects, sales increased 79% and 58% for Asia and Japan, respectively. Sales in Europe rose approximately 60% compared to a year ago, excluding the unfavorable foreign currency translation effect.

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 2010 increased as compared with 2009. Sales of unit-driven products represented 63% of sales and sales of capital-driven products represented 37% of total sales in 2010. This compares to a unit-driven to capital-driven ratio of 70:30 for 2009. The year-over-year shift in relative demand reflects the increase in capital spending by semiconductor customers after the very low spending for capacity-related products in the first half of 2009.

Sales of unit-driven products increased 54% in 2010. Unit-driven products generally 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 wafer shippers used to ship raw wafers, particularly at wafer sizes of 200mm and below. Sales of shippers and liquid filtration products rose by 133% and 50%, respectively.

Year-over-year sales of capital-driven products increased 117% in 2010. 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 components and systems increased 120% led by higher sales of fitting valves and flow controllers. Sales of wafer transport products such as 200mm and 300mm FOUPs increased by 161%. Sales of gas microcontamination products, which consist of gas filters and purification systems, rose by 132%.

The Company believes the sales increases noted above are primarily volume driven. Based on the information available, the Company believes it improved or maintained market share for its products and that the effect of selling price erosion was nominal. Additionally, given that no single customer accounts for more than 10% of the Company s annual revenue, the increase in sales has not been driven by any one particular customer or group of customers, but rather by the recovery in the semiconductor and other high-technology sectors as a whole.

Gross profit Gross profit for 2010 increased by $172.8 million, to $310.6 million, an increase of 125% from $137.8 million for 2009. The gross margin rate for 2010 was 45.1% versus 34.6% for 2009.

The Company s considerably higher gross profit and improved gross margin compared to a year earlier mainly reflect the significant year-over-year sales increase and the associated increased levels of factory utilization. Sales increases, along with a slight improvement in sales mix, accounted for approximately 84% of the gross profit improvement in 2010.

The remaining gross profit improvements reflected improved factory utilization (approximately $12.7 million), the reduction in cost of sales period expense recorded in connection with manufacturing production falling below normal capacity (described in further detail below) and the absence of $4.6 million in incremental charges recorded in 2009 associated with the fair market value write-up of inventory acquired in business combinations. The inventory mark-ups were recorded in connection with the 2008 Poco Graphite, Inc. (POCO) and 2009 Pureline Co., Ltd. (Pureline) business combinations and were charged to cost of sales over inventory turns of the acquired inventory. The net reduction in charges associated with the amortization of the fair market value mark-ups had a favorable 0.7% impact on the Company s consolidated gross margin rate.

As noted in the preceding paragraph, the Company s gross profit and gross margin rate benefitted from the reduction in cost of sales period expense recorded in connection with manufacturing production falling below normal capacity. During 2009, the Company experienced very low levels of factory utilization, particularly during the first half of the year. Accordingly, the Company included in cost of sales period expense of $11.0 million in 2009 in connection with its below-capacity production levels. The comparable 2010 amount was $1.0 million. The net reduction in charges associated with below-capacity production levels had a favorable 1.5% impact on the Company s consolidated gross margin rate in 2010.

Selling, general and administrative expenses Selling, general and administrative (SG&A) expenses for 2010 increased $30.1 million, or 26%, to $147.1 million from $117.0 million in 2009. SG&A expenses, as a percent of net sales, decreased to 21.4% from 29.3% a year earlier, as the increase in net sales exceeded the growth in SG&A expenses.

The increase in SG&A expenses was due to higher employee costs ($23.0 million), mainly reflecting the reversal of salary reductions and the absence of unpaid employee furloughs put in place in 2009, as well as higher sales commission expense and the accrual of incentive compensation in 2010. In addition, the increase in SG&A costs reflects unfavorable foreign currency translation effects of $3.8 million.

Engineering, research and development expenses Engineering, research and development (ER&D) expenses increased by $8.9 million, or 25%, to $43.9 million in 2010 compared to $35.0 million in 2009. ER&D expenses as a percent of net sales were 6.4% compared to 8.8% a year ago, reflecting the significant increase in net sales, offset in part by the increase in ER&D expenditure levels.

The increase in ER&D expense mainly reflects higher employee costs ($6.2 million), reflecting the reversal of salary reductions and the accrual of incentive compensation in 2010, as well as increases in overall ER&D expense levels related to the support of current product lines and the development of new products and manufacturing technologies.

Amortization of intangible assets Amortization of intangible assets was $13.2 million in 2010 compared to $19.2 million for 2009. The decline reflects the absence of amortization expense for certain acquired developed technology and tradename assets that became fully amortized in either 2009 or 2010.

Restructuring charges The Company incurred no restructuring charges in 2010. Restructuring charges of $15.5 million were recorded in 2009 associated with employee termination and other costs related to the business restructuring actions taken in response to the downturn in the semiconductor industry as well as the global business restructuring of the Company s sales and marketing function, manufacturing operations, and realignment of the global supply chain and other ancillary operational functions initiated late in 2008. See Note 12 to the Company s consolidated financial statements for additional detail.

Interest expense, net Net interest expense was $3.5 million in 2010 compared to net interest expense of $9.2 million in 2009. The decrease was due mainly to a significant decrease in the Company s average outstanding debt compared to a year ago. Interest expense for 2010 included a charge of $0.9 million for the accelerated write-off of previously capitalized debt issuance costs associated with the reduction in the Company s revolving credit commitment from $121.7 million to $60.0 million as per the May 19, 2010 amendment to the Company s revolving credit agreement. See note 13 to the Company s consolidated financial statements for additional detail.

Other expense, net Other expense was $1.4 million in 2010 compared to $1.7 million in 2009. In 2010, other expense reflects foreign currency transaction losses of $2.3 million, primarily related to the remeasurement of yen-denominated assets and liabilities held by the Company s U.S. entity, offset in part by gains of $0.9 million on the sale of the Company s interest in two equity investments.

In 2009, other expense included foreign currency transaction losses of $1.3 million, primarily related to the remeasurement of yen-denominated assets and liabilities held by the Company s U.S. entity, and an impairment loss on an equity investment of $1.0 million in the fourth quarter of 2009.

Income tax expense (benefit) The Company recorded income tax expense of $15.0 million in 2010 compared to an income tax benefit of $3.0 million in 2009. The Company s year-to-date effective tax rate was 14.8% in 2010, compared to 5.0% in 2009.

In 2010, the Company s effective tax rate was lower than U.S. statutory rates mainly due to the $13.7 million decrease in the Company s U.S. deferred tax asset valuation allowance. Management concluded the Company will realize certain deferred tax assets related to current taxes payable and has thus released the allowance for a portion of its U.S. deferred tax assets. The effective tax rate also benefitted from the Company s 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 is exempt from income taxes. The effective tax rate is also affected by lower tax rates in certain of the Company s taxable jurisdictions.

In 2009, the Company s tax benefit was lower than expected under U.S. statutory rates, mainly due to the $15.1 million increase in the Company s U.S. deferred tax asset valuation allowance. Management concluded that it was not more likely than not that the Company would realize certain deferred tax assets associated with 2009 domestic operating losses, and thus provided an allowance for the portion of deferred tax assets that management concluded will not be utilized. The Company also reduced its foreign valuation allowance by $0.2 million.

Equity in net loss of affiliates The Company recorded equity in the net loss of affiliates of $1.4 million in 2010 compared to equity in the net loss of affiliates of $0.9 million in 2009. Results in 2010 included an impairment loss of $2.2 million as the Company determined that one of its investments accounted under the equity method was partially impaired.

Net income (loss) attributable to Entegris, Inc. Net income attributable to the Company was $84.4 million, or $0.63 per diluted share, in 2010 compared to a net loss attributable to the Company of $57.7 million, or $0.49 per share, in 2009. The significant improvement mainly reflects the Company s significantly higher net sales and corresponding increase in gross profit, partly offset by higher SG&A and ER&D expenses, as described in greater detail above.

Segment Analysis

The Company reports its financial performance based on three reporting segments. The following is a discussion of the results of operations of these three business segments. See Note 20 Segment Reporting to the consolidated financial statements for additional information on the Company s three segments.

The following table presents selected sales and segment profit data for the Company s three segments, for the years ended December 31, 2010 and 2009.

(In thousands)	2010	2009
Contamination Control Solutions:		
Net sales	$ 435,858	$ 241,163
Segment profit	122,891	29,118
Microenvironments:		
Net sales	$ 182,471	$ 111,465
Segment profit	40,907	3,485
Specialty Materials:		
Net sales	$ 70,087	$ 46,016
Segment profit	9,103	2,925

Contamination Control Solutions (CCS)

For the year ended December 31, 2010, CCS net sales increased 81%, to $435.9 million, from $241.2 million in the comparable period last year. CCS reported a segment profit of $122.9 million for the year ended December 31, 2010 compared to a $29.1 million segment profit in the comparable period last year, an increase of 322%.

CCS recorded strong growth for all product lines, particularly for sales of gas filtration and components and systems products, reflecting the continuation of the recovery in the semiconductor industry that began during the second quarter of 2009. The sales increase for 2010 included incremental sales of $6.1 million from the Company s Pureline subsidiary acquired in July 2009.

The sharp increase in sales volume and the resulting improvement in gross profit primarily account for the year-over-year change in the segment s profitability. Slightly offsetting the absolute dollar increase in gross profit, CCS operating expenses increased 31%, mainly due to higher selling and engineering, research and development costs.

Microenvironments (ME)

For the year ended December 31, 2010, ME net sales increased 64%, to $182.5 million, from $111.5 million in the comparable period last year. ME reported a segment profit of $40.9 million for the year ended December 31, 2010 compared to a $3.5 million segment profit in the comparable period last year, an increase of 1,074%.

The change in net sales reflects the improving economic and semiconductor industry conditions noted above, with higher demand for all ME product lines, particularly wafer process and wafer shipper products.

The resulting improvement in gross profit associated with the increase in sales volume primarily accounts for the year-to-year change in the segment s profit. Slightly offsetting the increase in gross profit, ME operating expenses increased 32%, mainly due to higher selling and engineering, research and development costs.

Specialty Materials (SMD)

For the year ended December 31, 2010, SMD net sales increased 52%, to $70.1 million, up from $46.0 million in the year ended December 31, 2009. SMD reported a segment profit of $9.1 million in 2010 compared to a $2.9 million segment profit in 2009, an increase of 211%.

The sales increase and related improvement in profitability reflected higher demand for both SMD s specialty coated and graphite-based products used in semiconductor manufacturing and in other industrial markets. The increase in gross profit reflected the sharp increase in sales as well as a reduction in period expense recorded in cost of sales in connection with below-capacity manufacturing production levels at the segment s POCO subsidiary. SMD s operating expenses rose 16% in 2010 compared to 2009, mainly reflecting higher selling and engineering, research and development costs.

Year ended December 31, 2009 compared to year ended December 31, 2008

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, 2009 and 2008. 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)	2009	% of net sales	2008	% of net sales
Net sales	$ 398,644	100.0%	$ 554,699	100.0%
Cost of sales	260,832	65.4	343,184	61.9
Gross profit	137,812	34.6	211,515	38.1
Selling, general and administrative expenses	117,001	29.3	147,531	26.6
Engineering, research and development expenses	35,039	8.8	40,086	7.2
Amortization of intangible assets	19,237	4.8	19,585	3.5
Impairment of goodwill			473,799	85.4
Restructuring charges	15,463	3.9	10,423	1.9
Operating loss	(48,928)	(12.3)	(479,909)	(86.5)
Interest expense, net	9,215	2.3	1,018	0.2
Other expense, net	1,745	0.4	15,486	2.8
Loss before income taxes and equity in net loss of affiliates	(59,888)	(15.0)	(496,413)	(89.5)
Income tax (benefit) expense	(2,996)	(0.8)	19,201	3.5
Equity in net loss of affiliates	867	0.2	283	0.1
Loss from continuing operations	$ (57,759)	(14.5)	$ (515,897)	(93.0)

Net sales For the year ended December 31, 2009, net sales were $398.6 million, down $156.1 million, or 28%, from sales for the year ended December 31, 2008.

The Company s 2009 sales decline primarily reflected the continuation of the global economic downturn and, more specifically, the severe downturn in both the capital and unit-driven segments of the semiconductor industry that began during the second half of 2008. On a sequential basis, revenues declined sharply from $145.8 million in the third quarter of 2008 to $112.7 million in the fourth quarter of 2008 and $59.0 million in the first quarter of 2009. An upturn in bookings and sales of the Company s products began in the second quarter of 2009, with sales improving to $82.6 million in the second quarter, $110.7 million in the third quarter and $146.3 million in the fourth quarter of 2009.

During the second quarter, the Company experienced an upturn in bookings and sales of certain of its unit-driven, consumable products and recovery of the Company s capital-driven product lines began in the third quarter. The Company believes the revenue downturn was primarily volume driven. Based on the information available, the Company believes it maintained market share for its products and that the effect of selling price erosion was nominal.

The sales decline was mitigated by the full-year inclusion of sales of Poco Graphite, Inc. (POCO), which was acquired in August 2008. Excluding that factor, sales fell 32.2% in 2009 when compared to 2008.

The effect of fluctuations in foreign currency rates was negligible. The sales decline included an unfavorable foreign currency translation effect of $0.1 million related to the year-over-year weakening of most international currencies, most notably the Korean won, Taiwanese dollar and the Euro, versus the U.S. dollar, which was essentially offset by the relative strength of the Japanese yen against the U.S. dollar.

On a geographic basis, total sales to North America were 29%, Asia Pacific 36%, Europe 16% and Japan 19% in 2009. 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 2009 decreased as compared with 2008. Sales of unit-driven products represented 70% of sales and sales of capital-driven products represented 30% of total sales in 2009. This compared to a unit-driven to capital-driven ratio of 65:35 for 2008. The year-over-year shift in relative demand toward unit-driven products reflected lower spending by semiconductor customers for capital-driven, capacity-related products such as wafer carriers and liquid systems.

Sales of unit-driven products fell 23% in 2009. Excluding sales of POCO products, sales of unit-driven products fell 29% in 2009. Unit-driven products generally 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 wafer shippers used to ship raw wafers, particularly at wafer sizes of 200mm and below, as well as chip trays and data storage components used to ship 65mm and 95mm disk drives. Sales of shippers declined 29%; sales of data storage products fell by 64%; and sales of filters fell by 19%.

Year-over-year sales of capital-driven products decreased 39% in 2009. 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 35% due to lower sales of valves and flow controllers, which fell by 51%. Sales of wafer transport products such as 200mm and 300mm FOUPs fell by 60%. Sales of gas microcontamination products also fell by 35%, primarily due to decreased sales of gas filtration products.

Gross profit Gross profit for 2009 decreased by $73.7 million, to $137.8 million, a decrease of 35% from $211.5 million for 2008. The gross margin rate for 2009 was 34.6% versus 38.1% for 2008.

The significant year-over-year sales decrease accounted for approximately 80% of the gross profit decline for 2009. The Company experienced lower factory utilization due to the sales decrease, particularly during the first half of the year. This resulted in manufacturing production falling below normal capacity. Accordingly, the Company included in cost of sales period expense of $11.0 million in the year ended December 31, 2009 in connection with its below-capacity production levels, accounting for a 2.8% decrease in the Company s gross margin rate.

In addition, the Company s gross profit in 2009 was also affected by unfavorable product mix, with a greater portion of sales related to lower margin products, as well as increased overhead rates associated with reduced production levels.

In 2009, the Company recorded a $4.6 million incremental charge to cost of sales associated with the amortization of the fair market value mark-up of inventory acquired in business combinations as compared to

$13.5 million in similar charges in 2008. The inventory mark-ups were recorded in connection with the POCO and Pureline Co., Ltd. (Pureline) business combinations and were charged to cost of sales over inventory turns of the acquired inventory. The net reduction in charges associated with the amortization of the fair market value mark-ups had a favorable 2.2% impact on the Company s overall gross margin rate.

Selling, general and administrative expenses Selling, general and administrative (SG&A) expenses of $117.0 million for 2009 decreased $30.5 million, or 21%, compared to $147.5 million in 2008. SG&A expenses, as a percent of net sales, increased to 29.3% from 26.6% a year earlier, reflecting the decrease in net sales.

The year-over-year decrease in SG&A costs included compensation-related reductions of $12.6 million, reduced travel expense of $4.1 million and professional services expense of $7.3 million, and a favorable foreign currency translation effect of $0.5 million. SG&A expenses for the year ended 2008 included $4.1 million of severance-related costs due to personnel terminations associated with operational streamlining efforts.

Engineering, research and development expenses Engineering, research and development (ER&D) expenses decreased by $5.0 million, or 13%, to $35.0 million in 2009 compared to $40.1 million in 2008. The reduction in ER&D expense mainly reflects lower employee costs. ER&D expenses as a percent of net sales were 8.8% compared to 7.2% a year ago.

Amortization of intangible assets Amortization of intangible assets was $19.2 million in 2009 compared to $19.6 million for 2008.

Impairment of Goodwill The Company performed an assessment of impairment of its goodwill twice during 2008, once in connection with its annual impairment test of goodwill in the third quarter and again in the fourth quarter due to events and changes in circumstances that indicated the Company had a trigger event. In addition, the Company tested for impairment of its 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 management s forecasted level of business. As a result of the impairment assessments, the Company recorded impairment charges of goodwill of $473.8 million in 2008. As of December 31, 2009 and 2008, the Company had no remaining goodwill.

Restructuring charges Restructuring charges were $15.5 million in 2009 compared to $10.4 million in the year-ago period. 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. The Company incurred employee termination and other costs in connection with the business restructuring and actions taken in response to the downturn in the semiconductor industry that began during the second half of 2008. See Note 12 to the Company s consolidated financial statements for additional detail.

Interest expense, net Net interest expense was $9.2 million in 2009 compared to net interest expense of $1.0 million in 2008. The increase was due mainly to a significant increase in the Company s average outstanding debt compared to a year ago and higher interest rates under the Company s Restated Credit Agreement.

Other expense Other expense was $1.7 million in 2009 compared to $15.5 million in 2008. In 2009, other expense consisted mainly of foreign currency transaction losses of $1.3 million, primarily related to the remeasurement of yen-denominated assets and liabilities held by the Company s U.S. entity, and an impairment loss on an equity investment of $1.0 million in the fourth quarter of 2009.

Other expense in 2008 included impairment losses on equity investments of $11.1 million and foreign currency transaction losses of $4.4 million, also primarily related to the remeasurement of yen-denominated assets and liabilities.

Income tax (benefit) expense The Company recorded an income tax benefit of $3.0 million in 2009, compared to income tax expense of $19.2 million in 2008. The effective tax rate was 5.0% in 2009 compared with a (3.9%) rate in 2008.

In 2009, the Company s tax rate was lower than U.S. statutory rates, mainly due to the $15.1 million increase in the Company s U.S. deferred tax asset valuation allowance. Management concluded that it was not more likely than not that the Company would realize certain deferred tax assets associated with 2009 U.S. operating losses, and thus provided an allowance for the portion of deferred tax assets management concluded will not be utilized. The Company also reduced its foreign valuation allowance by $0.2 million.

The effective tax rate for 2008 was 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 2008 economic and industry downturn, and its impact on the Company s future outlook, management reviewed its deferred tax assets and concluded that the uncertainties related to the realization of its assets became unfavorable. Management considered that the negative evidence of a cumulative three-year U.S. operating loss, the expectation for U.S. operating results in early future years and a finite carryforward period for the Company s U.S. foreign tax credits was sufficiently significant to outweigh all identified positive evidence and tax planning strategies. Accordingly, management concluded that it was not more likely than not that the Company would realize certain deferred tax assets and thus provided an allowance for the portion of deferred tax assets management concluded would not be utilized.

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.

Net loss The Company recorded a net loss of $57.8 million, or $0.49 per share, in 2009, compared to a net loss of $517.0 million, or $4.59 per diluted share, in 2008. The Company s loss from continuing operations for 2009 was $57.8 million, or $0.49 per share, compared to income from continuing operations of $515.9 million, or $4.58 per diluted share, in the prior year. The net loss for 2008 included a goodwill impairment charge of $473.8 million ($454.6 million, net of tax).

Segment Analysis

Effective January 1, 2009, the Company changed its financial reporting structure due to organizational changes. Beginning in 2009, the Company reported its financial performance based on three reporting segments. The following is a discussion on the results of operations of these three business segments. See Note 20 Segment Reporting to the consolidated financial statements for additional information on the Company s three segments.

The following table presents selected sales and segment profit data for the Company s three segments for the years ended December 31, 2009 and 2008.

(In thousands)	**2009**	**2008**
Contamination Control Solutions:		
Net sales	$ 241,163	$ 330,810
Segment profit	29,118	77,024
Microenvironments:		
Net sales	$ 111,465	$ 190,761
Segment profit	3,485	24,276
Specialty Materials:		
Net sales	$ 46,016	$ 33,128
Segment profit	2,925	9,250

Contamination Control Solutions (CCS)

For the year ended December 31, 2009, CCS net sales decreased 27%, to $241.2 million, from $330.8 million in the prior year. The decrease in net sales reflected the underlying economic and semiconductor industry conditions noted above.

CCS reported a segment profit of $29.1 million for the year ended December 31, 2009 compared to a $77.0 million segment profit in the prior year, a decrease of 62%.

The sharp decline in sales volume and the resulting reduction in gross profit primarily accounted for the year-to-year change in the segment s operating results. Slightly offsetting the decline in gross profit, CCS operating expenses decreased 13%, mainly due to lower selling and engineering, research and development costs.

Microenvironments (ME)

For the year ended December 31, 2009, ME net sales decreased 42%, to $111.5 million, from $190.8 million in the prior year. The changes in net sales reflect the underlying economic and semiconductor industry conditions noted above.

ME reported segment income of $3.5 million for the year ended December 31, 2009 compared to a $24.3 million segment profit in the prior year, a decrease of 86%.

The sharp decline in sales volume and the resulting reduction in gross profit primarily account for the year-to-year change in the segment s operating results. Slightly offsetting the decline in gross profit, ME operating expenses decreased 18%, mainly due to lower selling and engineering, research and development costs.

Specialty Materials (SMD)

For the year ended December 31, 2009, SMD net sales increased 39%, to $46.0 million, from $33.1 million in the prior year. The sales for the year ended December 31, 2009 reflected the full-year inclusion of net sales from the segment s POCO subsidiary. Excluding that factor, sales fell 29% in 2009 when compared to 2008.

SMD reported a segment profit of $2.9 million in 2009 compared to a $9.3 million segment profit in 2008, a decrease of 68%. The decline in 2009 reflected the adjusted sales decline noted above as well as significant period expense included in cost of sales in connection with the below-normal capacity production levels at POCO.

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, 2010. 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)

			2009				2010	
(In thousands)	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Net sales	$ 59,038	$ 82,576	$ 110,706	$ 146,324	$ 160,511	$ 167,575	$ 178,230	$ 182,100
Gross profit	5,018	23,730	44,777	64,287	73,151	77,127	79,856	80,509
Selling, general and administrative expenses	29,721	25,685	29,175	32,420	35,782	36,592	36,478	38,199
Engineering, research and development expenses	8,904	7,843	8,575	9,717	10,820	10,736	11,381	10,997
Amortization of intangible assets	4,981	4,931	4,723	4,602	4,272	3,364	2,823	2,772
Restructuring charges	4,634	5,452	2,368	3,009				
Operating (loss) profit	(43,222)	(20,181)	(64)	14,539	22,277	26,435	29,174	28,541
Net (loss)income attributable to Entegris, Inc.	(37,745)	(22,492)	(7,608)	10,124	16,550	18,385	22,418	27,003

(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	8.5	28.7	40.4	43.9	45.6	46.0	44.8	44.2
Selling, general and administrative expenses	50.3	31.1	26.4	22.2	22.3	21.8	20.5	21.0
Engineering, research and development expenses	15.1	9.5	7.7	6.6	6.7	6.4	6.4	6.0
Amortization of intangibles	8.4	6.0	4.3	3.1	2.7	2.0	1.6	1.5
Restructuring charges	7.8	6.6	2.1	2.1				
Operating (loss) profit	(73.2)	(24.4)	(0.1)	9.9	13.9	15.8	16.4	15.7
Net (loss) income attributable to Entegris, Inc.	(63.9)	(27.2)	(6.9)	6.9	10.3	11.0	12.6	14.8

The Company s 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.

The Company s financial results for the two-year period ended December 31, 2010 were significantly affected by global economic conditions and, more specifically, the severe downturn in both the capital and unit-driven segments of the semiconductor industry that began during the second half of the year ended December 31, 2008 and the ensuing recovery.

The Company s business downturn reached a trough during the first quarter of 2009. Starting in the second quarter of 2009, the Company began to experience an upturn in bookings and sales of certain of its unit-driven,

consumable products and recovery of the Company s capital-driven product lines began in the third quarter of 2009. From a low point of $59.0 million in the first quarter of 2009, quarterly sales of the Company s products and services rose steadily on a sequential basis to $182.1 million in fourth quarter of 2010.

The variability in sales was the single most important factor underlying the changes in the Company s gross profit and operating income (loss) over the past eight quarters. In addition, cost of sales in the first quarter of 2009 included an incremental charge of $4.1 million associated with the write-up of acquired inventories to fair value and period expense of $8.2 million and $1.9 million was recorded in the first and second quarters of 2009 in connection with below-normal capacity production levels.

The Company also incurred restructuring charges each quarter in 2009 in connection with the restructuring of its sales and marketing function, manufacturing operations, and realignment of its global supply chain and other ancillary operational functions.

These factors, along with other less significant items, contributed to widely fluctuating quarterly results, including periods with significant net losses in 2009, for the Company.

Liquidity and Capital Resources

The Company has historically financed its operations and capital requirements through cash flow from its operating activities, long-term loans, lease financing and borrowings under domestic and international short-term lines of credit. In fiscal 2000 and 2009, the Company raised capital via public offerings of its common stock.

Operating activities

Net cash flow provided by operating activities totaled $140.9 million for the year ended December 31, 2010. Cash generated by the Company s operations included net income of $85.1 million, as well as the impact of various non-cash charges, primarily depreciation and amortization of $41.2 million and share-based compensation expense of $7.6 million. The net impact of changes in operating assets and liabilities, mainly reflecting increases in accounts receivable and inventory, offset by increases in accounts payable, accrued expenses and income taxes payable, partially offset the cash otherwise generated by the Company s operations.

Working capital stood at $279.5 million at December 31, 2010, including $134.0 million in cash and cash equivalents, up from $193.5 million as of December 31, 2009, including $68.7 million in cash and cash equivalents.

Accounts receivable, net of foreign currency translation adjustments, increased by $26.8 million during 2010. This increase reflects an upturn in bookings and sales of the Company s products. The Company s days sales outstanding was 63 days compared to 57 days at the beginning of the year.

Inventories at the end of the year increased by $14.3 million from December 31, 2009, after taking into account the impact of foreign currency translation adjustments and the provision for excess and obsolete inventory. The increase in inventories was mainly due to higher levels of production associated with the Company s higher sales and bookings in 2010.

Accounts payable and accrued expenses were $34.9 million higher than a year ago and relate mainly to increased incentive accruals, which will be paid during the first quarter of 2011. Income taxes payable and refundable income taxes increased by $13.2 million in 2010, with the Company making payments, net of refunds, of $3.6 million.

Investing activities Cash flow used in investing activities totaled $12.0 million in 2010. Acquisition of property and equipment totaled $16.8 million, primarily for additions related to manufacturing equipment and tooling.

During the second quarter, the Company received proceeds of $3.6 million from the South Korean government in connection with eminent domain proceedings whereby the Company will relinquish its existing land and building to the government upon completion of a new facility in South Korea. As of December 31, 2010, the title to the land was transferred to the Korean government, with transfer of the title to the building expected to be completed in the first quarter of 2011.

The Company received proceeds totaling $0.9 million from the sale of the Company s equity interests in two privately held companies in 2010.

Under the terms of its revolving credit facility, the Company is restricted from making capital expenditures in excess of $30.0 million in the first 10 months of 2011. The Company does not anticipate that this limit on capital expenditures will have an adverse effect on the Company s operations.

Financing activities Cash used in financing activities totaled $65.7 million during 2010. The Company received proceeds of $186.6 million from new borrowings and made debt payments of $259.2 million during 2010.

The Company has a revolving credit facility maturing November 1, 2011. On May 19, 2010, the Company amended the underlying revolving credit facility agreement with its lenders. The amendment reduced the revolving credit commitment from $121.7 million to $60.0 million, all of which is available to the Company dependent upon the Company s borrowing base, which is determined based on the Company s levels of qualifying domestic accounts receivable, inventories and value of its property, plant and equipment.

As of December 31, 2010, the Company s borrowing base supported $58.0 million of its available revolving commitment amount of $60.0 million. As of that date, the Company had no outstanding borrowings and $0.7 million undrawn on outstanding letters of credit under the revolving credit facility.

In addition, the May 19, 2010 amendment to the revolving credit facility agreement provided greater flexibility for certain thresholds related to the Company s capital expenditures and cash management covenants. The amendment did not change the cash flow leverage ratio or fixed charge coverage ratio covenants included in the terms of the revolving credit facility. The revolving credit facility agreement was further amended December 20, 2010 to provide greater flexibility related to the Company s cash management covenants. Through December 31, 2010, the Company was in compliance with all applicable debt covenants included in the terms of the revolving credit facility. Beginning in the second quarter of 2010, the terms of the revolving credit facility require that the Company maintain a cash flow leverage ratio of no more than 3.0 to 1.0 and a fixed charge coverage ratio no lower than 1.5 to 1.0. At December 31, 2010, the Company s cash flow leverage and fixed charge coverage ratios stood at 0.01 to 1.0 and 5.6 to 1.0, respectively. See note 10 to the Company s consolidated financial statements for additional detail.

The Company also has a line of credit with two banks that provide for borrowings of Japanese yen for the Company s Japanese subsidiary, equivalent to an aggregate of approximately $14.7 million. There were no outstanding borrowings under these lines of credit at December 31, 2010.

At December 31, 2010, the Company s shareholders equity stood at $459.6 million, up 33% from $346.2 million at the beginning of the year. The increase reflected net earnings attributable to the Company of $84.4 million, additional paid-in capital of $7.6 million associated with the Company s share-based compensation expense, $6.8 million received in connection with common shares issued under the Company s stock option and employee stock purchase plans and cumulative translation adjustments of $15.4 million.

As of December 31, 2010, the Company s sources of available funds were its cash and cash equivalents of $134.0 million, funds available under its revolving credit facility and international credit facilities and cash flow generated from operations. The Company must maintain a minimum of $10.0 million in cash and cash equivalents in the United States under the terms of the revolving credit facility.

The Company believes that its cash and cash equivalents, funds available under the revolving credit facility and international credit facilities and cash flow generated from operations will be sufficient to meet its working capital and investment requirements for the next twelve months. If available liquidity is not sufficient to meet the Company s operating and debt service obligations as they come due, management will need to pursue alternative arrangements through additional equity or debt financing in order to meet the Company s cash requirements. However, there can be no assurance that any such financing would be available on commercially acceptable terms.

New Accounting Pronouncements

In June 2009, the Financial Accounting Standards Board (FASB) issued SFAS No. 167, *Amendments to FASB Interpretation No 46(R)* (Accounting Standards Codification (ASC) Topic 810). This guidance amended certain requirements to improve financial reporting by enterprises involved with variable interest entities and to provide more relevant and reliable information to users of financial statements. This guidance was effective for the Company in 2010 and did not have a material effect on the Company s consolidated financial statements.

In October 2009, the FASB issued Accounting Standards Update (ASU) No. 2009-13, *Revenue Recognition* (Accounting Standards Codification (ASC) Topic 605) *Multiple-Deliverable Revenue Arrangements*, *a consensus of the FASB Emerging Issues Task Force.* This guidance modified the fair value requirements of ASC subtopic 605-25 *Revenue Recognition-Multiple Element Arrangements* by allowing the use of the best estimate of selling price for determining the selling price of a deliverable. A vendor is now required to use its best estimate of the selling price when vendor specific objective evidence or third-party evidence of the selling price cannot be determined. In addition, the residual method of allocating arrangement consideration is no longer permitted. This guidance is effective for the Company in 2011. The adoption of this ASU did not have a material effect on the Company s consolidated financial statements.

In January 2010, the FASB issued ASU No. 2010-06, *Fair Value Measurements and Disclosures (ASC Topic 820)*, guidance related to fair value measurements requiring new disclosures regarding transfers in and out of Level 1 and 2 and requiring the gross presentation of activity within Level 3. The guidance also clarifies existing disclosures of inputs and valuation techniques for Level 2 and 3 fair value measurements. Additionally, the guidance includes conforming amendments to employers disclosures about postretirement benefit plan assets. The new disclosures and clarifications of existing disclosures are effective for interim and annual reporting periods beginning after December 15, 2009 (except for the disclosure of activity within Level 3 fair value measurements which is effective for fiscal years beginning after December 15, 2010 and for interim periods within those years). The adoption of this ASU did not have a material effect on the Company s consolidated financial statements.

In February 2010, the FASB issued ASU No. 2010-09, *Subsequent Events (ASC Topic 855) Amendments to Certain Recognition and Disclosure Requirements*, which eliminated the requirement for public companies to disclose the date through which subsequent events have been evaluated. As required, the Company will continue to evaluate subsequent events through the date of the issuance of its consolidated financial statements. However, consistent with the guidance, this date will no longer be disclosed. ASU No. 2010-09 was effective upon issuance for the Company. The adoption of this ASU did not have a material effect on the Company s consolidated financial statements.

Contractual Obligations

The following table summarizes the maturities of the Company s significant financial obligations as of December 31, 2010:

		Maturity by fiscal year					
(In thousands)	**Total**	**2011**	**2012**	**2013**	**2014**	**2015**	**Thereafter**
Contractual obligations related to off-balance sheet arrangements:							
Operating leases	$ 15,795	$ 5,871	$ 4,946	$ 3,585	$ 1,156	$ 237	
Total	$ 15,795	$ 5,871	$ 4,946	$ 3,585	$ 1,156	$ 237	
Contractual obligations reflected in the balance sheet:							
Unrecognized tax benefits[1]							
Pension obligations	$ 20,475	$ 1,042	$ 607	$ 685	$ 395	$ 820	$ 16,926
Total	$ 20,475	$ 1,042	$ 607	$ 685	$ 395	$ 820	$ 16,926

1 The Company had $2.5 million of total gross unrecognized tax benefits at December 31, 2010. The timing of any payments associated with 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.

Non-GAAP Information The Company s consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States (GAAP).

The Company also provides certain non-GAAP financial measures as a complement to financial measures provided in accordance with GAAP in order to better assess and reflect trends affecting the Company s business and results of operations. Regulation G, *Conditions for Use of Non-GAAP Financial Measures*, and other regulations under the Securities Exchange Act of 1934, as amended, define and prescribe the conditions for use of certain non-GAAP financial information. The Company provides non-GAAP financial measures of Adjusted EBITDA and Adjusted Operating Income (Loss) together with related measures thereof, and non-GAAP Earnings Per Share (EPS).

Adjusted EBITDA, a non-GAAP term, is defined by the Company as net income attributable to Entegris, Inc. before (1) net income attributable to noncontrolling interest, (2) equity in net (earnings) loss of affiliates, (3) income tax expense (benefit) (4) other expense, net, (5) interest expense, net, (6) restructuring costs, (7) charge for fair value mark-up of acquired inventory sold, (8) amortization of intangible assets and (9) depreciation. Adjusted Operating Income (Loss), another non-GAAP term, is defined by the Company as its Adjusted EBITDA plus depreciation. The Company also utilizes non-GAAP measures whereby Adjusted EBITDA and Adjusted Operating Income (Loss) are each divided by the Company s net sales to derive Adjusted EBITDA Margin and Adjusted Operating Margin, respectively.

Non-GAAP EPS, a non-GAAP term, is defined by the Company as net income attributable to Entegris, Inc. before (1) charge for fair value mark-up of acquired inventory sold, (2) amortization of intangible assets, (3) accelerated write-off of debt-issuance costs, (4) gain on sale of equity investments and (5) tax effect of the other adjustments to net income (loss) attributable to Entegris, Inc.

The Company provides supplemental non-GAAP financial measures to better understand and manage its business and believes these measures provide investors and analysts additional and meaningful information for the assessment of the Company s ongoing results. Management also uses these non-GAAP measures to assist in the evaluation of the performance of its business segments and to make operating decisions.

Management believes the Company s non-GAAP measures help indicate the Company s baseline performance before certain gains, losses or other charges that may not be indicative of the Company s business or future outlook and offer a useful view of business performance in that the measures provide a more consistent means of comparing performance. The Company believes the non-GAAP measures aid investors overall understanding of the Company s results by providing a higher degree of transparency for such items and providing a level of disclosure that will help investors understand how management plans, measures and evaluates the Company s business performance. Management believes that the inclusion of non-GAAP measures provides consistency in its financial reporting and facilitates investors understanding of the Company s historic operating trends by providing an additional basis for comparisons to prior periods.

Management uses Adjusted EBITDA and Adjusted Operating Income (Loss) to assist it in evaluations of the Company s operating performance by excluding items that management does not consider as relevant in the results of its ongoing operations. Internally, these non-GAAP measures are used by management for planning and forecasting purposes, including the preparation of internal budgets; for allocating resources to enhance financial performance; for evaluating the effectiveness of operational strategies; and for evaluating the Company s capacity to fund capital expenditures, secure financing and expand its business.

In addition, and as a consequence of the importance of these non-GAAP financial measures in managing its business, the Company s Board of Directors uses non-GAAP financial measures in the evaluation process to determine management compensation.

The Company believes that certain analysts and investors use Adjusted EBITDA, Adjusted Operating Income (Loss) and non-GAAP EPS as supplemental measures to evaluate the overall operating performance of firms in the Company s industry. Additionally, lenders or potential lenders use Adjusted EBITDA measures to evaluate the Company s creditworthiness.

The presentation of non-GAAP financial measures is not meant to be considered in isolation, as a substitute for, or superior to, financial measures or information provided in accordance with GAAP. Management strongly encourages investors to review the Company s consolidated financial statements in their entirety and to not rely on any single financial measure.

Management notes that the use of non-GAAP measures has limitations:

First, non-GAAP financial measures are not standardized. Accordingly, the methodology used to produce the Company s non-GAAP financial measures is not computed under GAAP and may differ notably from the methodology used by other companies. For example, the Company s non-GAAP measure of Adjusted EBITDA may not be directly comparable to EBITDA or an adjusted EBITDA measure reported by other companies.

Second, the Company s non-GAAP financial measures exclude items such as amortization of intangibles and depreciation that are recurring. Amortization of intangibles and depreciation have been, and will continue to be for the foreseeable future, a significant recurring expense with an impact upon the Company s results of operations, notwithstanding the lack of immediate impact upon cash flows.

Third, there is no assurance the Company will not have future restructuring activities, gains or losses on sale of equity investments, charges for fair value mark-up of acquired inventory sold, accelerated write-offs of debt-issuance costs or similar items and, therefore, may need to record additional charges (or credits) associated with such items, including the tax effects thereon. The exclusion of these items from the Company s non-GAAP measures should not be construed as an implication that these costs are unusual, infrequent or non-recurring.

Management considers these limitations by providing specific information regarding the GAAP amounts excluded from these non-GAAP financial measures and evaluating these non-GAAP financial measures together with their most directly comparable financial measures calculated in accordance with GAAP. The calculations of

Adjusted EBITDA, Adjusted Operating Income (Loss), and non-GAAP EPS, and reconciliations between these financial measures and their most directly comparable GAAP equivalents are presented below in the accompanying tables.

Reconciliation of GAAP to Adjusted Operating Income (Loss) and Adjusted EBITDA

	Three Months Ended		Twelve Months Ended	
	December 31, 2010	December 31, 2009	December 31, 2010	December 31, 2009
Net sales	$ 182,100	$ 146,324	$ 688,416	$ 398,644
Net income (loss) attributable to Entegris, Inc.	$ 27,003	$ 10,124	$ 84,356	$ (57,721)
Adjustments to net income (loss) attributable to Entegris, Inc.				
Net income (loss) attributable to noncontrolling interest	(139)	(32)	766	(38)
Equity in net loss (earnings) of affiliates	1,838	(210)	1,353	867
Income tax expense (benefit)	(196)	1,231	15,006	(2,996)
Other expense, net	(271)	1,316	1,430	1,745
Interest expense, net	306	2,110	3,516	9,215
GAAP Operating income (loss)	28,541	14,539	106,427	(48,928)
Restructuring charges		3,009		15,463
Charge for fair value mark-up of acquired inventory		437		4,553
Amortization of intangible assets	2,772	4,602	13,231	19,237
Adjusted operating income (loss)	31,313	22,587	119,658	(9,675)
Depreciation	7,322	7,262	27,967	30,890
Adjusted EBITDA	38,635	29,849	147,625	21,215
Adjusted operating margin	17.2%	15.4%	17.4%	(2.4)%
Adjusted EBITDA as a % of net sales	21.2%	20.4%	21.4%	5.3%

Reconciliation of GAAP to Non-GAAP Earnings (Loss) per Share

	Three Months Ended		Twelve Months Ended	
	December 31, 2010	December 31, 2009	December 31, 2010	December 31, 2009
GAAP net income (loss) attributable to Entegris, Inc.	$ 27,003	$ 10,124	$ 84,356	$ (57,721)
Adjustments to net income (loss) attributable to Entegris, Inc.:				
Amortization of intangible assets	2,772	4,602	13,231	19,237
Charge for fair value mark-up of acquired inventory		437		4,553
Accelerated write-off of debt issuance costs		500	890	843
Gain on sale of equity investment			(892)	
Impairment of equity investment	2,164	1,000	2,164	1,000