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**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**Form 10-K**

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(Mark One)

**Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 2009

or

**Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 000-30789

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**ENTEGRIS, INC.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**41-1941551**  
(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.  Yes  No

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

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

The aggregate market value of voting stock held by non-affiliates of the registrant, based on the last sale price of the Common Stock on June 30, 2009, the last business day of registrant's most recently completed second fiscal quarter, was \$303,121,285. 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 19, 2010, 130,729,025 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

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**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 and other high-technology industries. For other high-technology applications, our products and materials are used to manufacture flat panel displays, high-purity chemicals, photoresists, solar cells, gas lasers, optical and magnetic storage devices, fiber optic cables, fuel cells and critical components for aerospace, glass manufacturing and biomedical applications. We sell our products worldwide through a direct sales force and through distributors in selected regions.

The Company was incorporated in Delaware in March 2005 in connection with a strategic merger of equals transaction between Entegris, Inc., a Minnesota corporation (Entegris Minnesota), and Mykrolis Corporation, a Delaware corporation (Mykrolis). Effective August 6, 2005, Entegris Minnesota and Mykrolis were each merged into the Company with the Company as the surviving corporation to carry on the combined businesses. Unless the context otherwise requires, the terms “Entegris”, “we”, “our”, or the “Company” mean Entegris, Inc., a Delaware corporation, and its subsidiaries; the term “Mykrolis” means Mykrolis Corporation and its subsidiaries when referring to periods prior to August 6, 2005; “Entegris Minnesota” means Entegris, Inc., a Minnesota corporation and its subsidiaries other than Entegris when referring to periods prior to August 6, 2005; and the term “Merger” refers to the transactions effected on August 6, 2005 described above. On August 11, 2008 we acquired Poco Graphite (POCO), a privately held company based in Decatur, Texas. The addition of POCO both augmented our base of business in the semiconductor industry and 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 15,000 standard and customized products that we believe provide the most comprehensive offering of products and services to maintain the purity and integrity of critical materials used by the semiconductor and other high-technology industries. Our products include both unit driven and capital expense driven products. Unit-driven and consumable products are consumed or exhausted during the manufacturing process and rely on the level of semiconductor and other manufacturing activity to drive growth. Capital expense driven products rely on the expansion of manufacturing capacity to drive growth. Our unit-driven and consumable product class includes membrane-based liquid filters and housings, metal-based gas filters, resin-based gas purifiers, wafer shippers, disk-shipping containers and test assembly and packaging products and consumable graphite and silicon carbide components used in plasma etch, ion implant and chemical vapor deposition processes in semiconductor manufacturing. Our capital expense driven products include our components, systems and subsystems that use electro-mechanical, pressure differential and related technologies, to permit semiconductor and other electronics manufacturers to monitor and control the flow and condition of process liquids used in these manufacturing processes, and our process carriers that protect the integrity of in-process wafers. Unit-driven and consumable products, including service revenue, accounted for approximately 70%, 65% and 60% of our net sales for fiscal years 2009, 2008 and 2007, respectively, and capital expense-driven products accounted for approximately 30%, 35% and 40% of our net sales for the fiscal years 2009, 2008 and 2007, respectively.

Our Internet address is [www.entegris.com](http://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](http://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.

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### SEMICONDUCTOR INDUSTRY BACKGROUND

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

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

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

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

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

*Photolithography.* Photolithography is the process step that defines the patterns of the circuits to be built on the chip. Before photolithography, a wafer is pre-coated with photoresist, a light-sensitive film composed of ultra-high purity chemicals in liquid form. The photoresist is exposed to specific forms of radiation, such as ultraviolet light, electrons or x-rays, to form patterns that eventually become the circuitry on the chip. This process is repeated many times, using different patterns and interconnects between layers to form the complex, multi-layer circuitry on a semiconductor chip. As device geometries decrease and wafer sizes increase, it is even more critical that these photoresists are dispensed on to the chip with accurate thickness and uniformity, as well as with low levels of contamination, and that the process gases are free of micro-contamination so that manufacturers can achieve acceptable yields in the manufacturing process. Our liquid filtration and liquid dispense systems play a critical role in assuring the pure, accurate and uniform dispense of photoresists on to the wafer. In addition, our gas micro-contamination systems eliminate airborne amine contaminants that can disrupt effective photolithography processes.

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

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

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

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

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

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

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

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

### OUR BUSINESS STRATEGY

Our objective is to be a 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 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.

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

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

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

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

*Ancillary Markets.* We plan to leverage our accumulated expertise in the semiconductor industry by developing products for applications that employ similar production processes that utilize materials integrity management, high-purity fluids and integrated dispense system technologies. Our products are used in manufacturing processes outside of the semiconductor industry, including the manufacturing of flat panel displays, fuel cell components, high-purity chemicals, photoresists, solar cells, gas lasers, optical and magnetic storage devices and fiberoptic cables. We plan to continue to identify and develop products that address materials management and advanced materials processing applications where fluid management plays a critical role. We believe that by utilizing our technology to provide manufacturing solutions across multiple industries, we are able to increase the total available market for our products and reduce, to an extent, our exposure to the cyclicity of any particular market.

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*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 material science solutions in the form of 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, 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, either of which can cause defects in the wafers if not removed. Our low hold-up volume disposable filters, with flat sheet membranes, use our Connectology™ technology to allow filter changes in less than a minute, significantly faster than conventional filters, to reduce the amount of expensive chemicals lost each time a filter is changed and to minimize operator exposure to hazardous solvents and vapors during changeout. We also offer a line of consumable PVA roller brush products to clean the wafer following the chemical mechanical planarization process. Our unique Planarcore™ PVA roller brush is molded on the core to allow easy installation that reduces tool downtime and a dimensionally stable product that provides consistent wafer-to-wafer cleaning performance.

**Components and Systems.** Chemicals spend most of their time in contact with fluid storage and management distribution systems, so it is critical for fluid storage and handling components to resist these chemicals and avoid contributing contaminants to the fluid stream. We offer chemical delivery products that allow the consistent and safe delivery of sophisticated chemicals from the chemical manufacturer to the point-of-use in the semiconductor fab. Most of these products are made from perfluoroalkoxy or PFA, a fluoropolymer resin widely used in the semiconductor industry because of its high purity and inertness to chemicals. The innovative design and reliable performance of our products and systems under the most stringent of process conditions has made us a leader in high-purity fluid transfer products and systems. Both semiconductor manufacturers and semiconductor OEMs

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use our chemical delivery products and systems. Our comprehensive product line provides our customers with a single-source provider for their chemical storage and management needs throughout the manufacturing process. Our chemical delivery products include valves, fittings, tubing, pipe, chemical containers and custom fabricated products for high-purity chemical applications.

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

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

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

### **MICROENVIRONMENTS**

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

**Wafer and Reticle Handling Products.** We are a global producer of wafer handling and reticle 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, 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.



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**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. We lead the market with our extensive, high-volume line of Ultrapak<sup>®</sup> and Crystalpak<sup>®</sup> 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<sup>®</sup> and DeviceCare<sup>SM</sup> services include product cleaning, certified re-use services for shipping products, on-site and off-site product maintenance and optimization, and end-of-life recycling for our wafer, device and disk-handling products. Re-use services can be customized depending on the customers needs to provide product cleaning, logistics, recovery, certification and supply solutions for our products.

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

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

### **ENTEGRIS SPECIALTY MATERIALS**

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

**Poco Graphite Products.** These products are made from specialized graphite or silicon carbide. Our Poco Graphite products sold to the semiconductor industry are used for critical components for semiconductor manufacturing equipment at various stages of the semiconductor manufacturing process including chemical vapor deposition, where our expendable graphite chamber liners and shower heads are critical components used in the CVD chamber; wet etch and clean, where our consumable graphite components deliver, baffle and confine the process gases during the etch process; and ion implant, where our consumable graphite components are

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critical elements of ion implantation equipment. In addition, our Poco Graphite high-quality graphite is used as precision consumable electrodes for electrical discharge machining, a non-contact precision thermoelectric machining process for hard and exotic metals and other materials. Poco Graphite also manufactures a number of graphite hot glass contact materials for use in the manufacture of glass containers. Finally, Poco Graphite manufactures a number of graphite consumable products for various industrial applications including bushings and thrust washers for aerospace applications, substrates for industrial print heads, components for scan heads in industrial optical applications, cathodes for fuel cells and heart valves for human implantation.

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

**Polymer Composites.** We are pursuing a number of advanced materials initiatives to produce single wall and multi-wall carbon nanotube polymer composite materials for use in various products in the semiconductor and other high technology markets.

### *Worldwide Applications Development and Field Support Capabilities*

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

### OUR CUSTOMERS AND MARKETS

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

Our most significant customers based on sales in fiscal 2009 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 original equipment manufacturers, materials suppliers and end users. The major manufacturers for flat panel displays and flat panel display equipment are concentrated in Japan, Korea and other parts of Asia.

In 2009, 2008 and 2007, net sales to our top ten customers accounted for approximately 29%, 26% and 28%, 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%, 71% and 74%, respectively, of our net sales. Over 3,200 customers purchased products from us during 2009.

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

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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, 2009, our sales and marketing force consisted of approximately 430 employees worldwide. Our direct sales force is supplemented by independent sales representatives and agents.

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

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

### COMPETITION

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

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

We believe that we compete favorably with respect to all of the factors listed above, but we cannot assure you that we will continue to do so. We believe that our key competitive strengths include our broad product line, the low total cost of ownership of our products, our ability to provide our customers with quick order fulfillment and our technical expertise. However, our competitive position varies depending on the market segment and specific product areas within these segments. While we have longstanding relationships with a number of semiconductor and other electronic device manufacturers, we also face significant competition from companies that have longstanding relationships with other semiconductor and electronic device manufacturers and, as a result, have been able to have their products specified by those customers for use in manufacturers’ fabrication facilities. In the markets for our consumable products, we believe that our differentiated membrane and materials integrity management technologies, strong supply chain capabilities that allow us to provide our customers with quick order fulfillment, and technical expertise, which enables us to develop membranes to meet specific customer needs and assist our customers in improving the functionality of our membranes for particular applications, allow

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us to compete favorably. In these markets our competitors compete against us on the basis of price, as well as alternative membrane technology having different functionality, manufacturing capabilities and breadth of geographic presence.

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

### ENGINEERING, RESEARCH AND DEVELOPMENT

Our aggregate engineering, research and development expenses in 2009, 2008 and 2007 were \$35.0 million, \$40.1 million and \$39.7 million, respectively. As of December 31, 2009, we had approximately 190 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 and 32 nanometer semiconductor devices. Driven by the proliferation of new materials and chemicals in the manufacturing processes and increased needs for tighter process control for 300 mm wafers, investments were made for new

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contamination control products in the area of copper interconnects, deep ultra-violet (DUV) photolithography, and chemical and gas management technologies for advanced wafer cleans, deposition and etch equipment. Additional investments were made in the area of advanced process control, monitoring and diagnostics capabilities for future generations of semiconductor manufacturing processes. Our employees also work closely with our customers' development personnel. These relationships help us identify and define future technical needs on which to focus our engineering, research and development efforts. In addition, we participate in Semiconductor Equipment and Materials International (SEMI), a consortium of semiconductor equipment suppliers. We also support research at academic and other institutions targeted at advances in materials science and semiconductor process development.

### MANUFACTURING

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

To meet our customer needs worldwide, we have established an extensive global manufacturing network with manufacturing facilities in the United States, Japan, 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.

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

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

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

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

### PATENTS AND OTHER INTELLECTUAL PROPERTY RIGHTS

We rely on a combination of patent, copyright, trademark and trade secret laws and license agreements to establish and protect our proprietary rights. As of January 22, 2010 our patent portfolio included 278 current U.S. patents, 551 current foreign patents, including counterparts to U.S. filings, 59 pending U.S. patent applications, 11 pending filings under the Patent Cooperation Treaty not yet nationalized and 482 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.

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

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

### GOVERNMENTAL REGULATION

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

### EMPLOYEES

As of February 1, 2010, we had approximately 2,400 full-time employees, including approximately 190 in engineering, research and development and approximately 430 in sales and marketing, as well as approximately 360 temporary employees. Given the variability of business cycles in the semiconductor industry and the quick response time required by our customers, it is critical that we be able to quickly adjust the size of our production staff to maximize efficiency. Therefore, we use skilled temporary labor as required.

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

### INFORMATION ABOUT OUR OPERATING SEGMENTS

Our financial reporting segments are Contamination Control Solutions (CCS), Microenvironments (ME), and Entegris Specialty Materials (ESM). In 2009, 2008 and 2007 approximately 71%, 71% and 74%, respectively, of our net sales were made to customers outside North America. Industry and geographic segment information is discussed in Note 21 to the Entegris, Inc. Consolidated Financial Statements (the "Financial Statements") included in response to Item 8 below, which Note is incorporated herein by reference.

### OTHER INFORMATION

On July 27, 2005, our Board of Directors adopted a shareholder rights plan (the "Rights Plan") pursuant to which Entegris declared a dividend on August 8, 2005 to its shareholders of record on that date of one preferred share purchase right (a "Right") for each share of Entegris common stock owned on August 8, 2005 and authorized the issuance of Rights in connection with future issuances of Entegris common stock. Each Right entitles the holder

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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 Solutions segment, polymer resins used by our Microenvironments segment and petroleum coke used by our Entegris 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.



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### EXECUTIVE OFFICERS

The following is a list, as of December 31, 2009, of our Executive Officers. All of the Corporate Officers listed below were elected to serve until the first Directors Meeting following the 2010 Annual Stockholders Meeting. All of the Other Executive Officers Listed below were appointed to their current positions by Corporate Officers.

<u>Name</u>	<u>Age</u>	<u>Office</u>	<u>First Appointed To Office*</u>
<u>CORPORATE OFFICERS</u>			
Gideon Argov	53	<i>President &amp; Chief Executive Officer</i>	2004
Gregory B. Graves	49	<i>Executive Vice President, Chief Financial Officer &amp; Treasurer</i>	2002
Bertrand Loy	44	<i>Executive Vice President &amp; Chief Operating Officer</i>	2001
Peter W. Walcott	63	<i>Senior Vice President, Secretary &amp; General Counsel</i>	2001
John J. Murphy	57	<i>Senior Vice President, Human Resources</i>	2005
John Goodman	49	<i>Senior Vice President, Chief Technology &amp; Innovation Officer</i>	2005
<u>OTHER EXECUTIVE OFFICERS</u>			
Lynn L. Blake	43	<i>Vice President of Finance, Chief Accounting Officer</i>	2007
Todd Edlund	47	<i>Vice President, General Manager, Contamination Control Solutions Division</i>	2007
Gregory Morris	52	<i>Vice President, Global Sales</i>	2008
William Shaner	42	<i>Vice President, General Manager, Microenvironments Division</i>	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., X-Rite Incorporated and Fundtech Corporation.

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

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

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

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

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

*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.

*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 Morris* has been Vice President, Global Sales since 2008. Prior to that time, Mr. Morris was our General Manager of Field Operations for the Americas from 2005 to 2008. Mr. Morris was President of the Entegris Minnesota Data Storage Business Unit from 2003-2005. From 1999 to 2003 Mr. Morris acted as General Manager of a wholly-owned subsidiary of Entegris Minnesota. Prior to 1999, 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. Prior to that time, Mr. Shaner was our Vice President for the Wafer Shipping Business from 2006 to 2007 and Vice President of Global Product Support for Microenvironments from 2005 to 2006. Prior to 2005, Mr. Shaner held a variety of positions with our predecessor companies since 1995, including President of the Entegris Minnesota Services Market from 2002 to 2005.

## 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 cyclicalities 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 this downturn or the timing or extent of a recovery, if any, for the semiconductor industry.

Furthermore, in periods of reduced demand, we must continue to maintain a satisfactory level of engineering, research and development expenditures and continue to invest in our infrastructure. At the same time, we have to manage our operations to be able to respond to 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.**

Notwithstanding the severe and prolonged downturn in the semiconductor industry and the related reduction in manufacturing operations during the period from 2001 to 2003, as well as during 2008 to 2009, there may still be excess manufacturing capacity. In addition, there may not be new high-opportunity applications to drive growth

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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 29%, 26% and 28% of our net sales in 2009, 2008 and 2007, 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 original equipment manufacturers dispose of their manufacturing operations and increase the outsourcing of their products to liquid and gas delivery system and other component companies, we may face increasing competitive pressures to grow our business in order to maintain our market share. If we are unable to maintain our competitive position, we could experience downward pressure on prices, fewer customer orders, reduced margins, the inability to take advantage of new business opportunities and a loss of market share. Further, we expect that existing and new competitors will improve the design of their existing products and will introduce new products with enhanced performance characteristics. The introduction of new products or more efficient production of existing products by our competitors could diminish our market share and increase pricing pressure on our products. Further, customers continue to demand lower prices, shorter delivery times and enhanced product capability. If we do not respond adequately to such pressures, we could lose customers or orders. If we are unable to compete successfully, we could experience pricing pressures, reduced gross margins and order 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 growing trend toward the use of 300 mm wafers has contributed to the increasing complexity of the semiconductor manufacturing process. The greater diameter of these wafers requires higher tooling costs and presents more complex handling, storage and transportation challenges. We have made substantial investments to complete a full line of 300 mm wafer shipping products, but there is no guarantee that our customers will adopt our 300 mm wafer shipping product lines as they convert existing 200 mm wafer fabrication facilities to the fabrication of 300 mm wafers or build new 300 mm wafer fabrication facilities. Sales of our shipping products for these applications has to date and could continue in the future be minimal and we might not recover our development costs.

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

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

As part of our business strategy, we have, and we expect to continue to address gaps in our product offerings, diversify into complementary product markets or pursue additional technology and customers through acquisitions, joint ventures or other types of collaborations. We also expect to adjust our portfolio of businesses to meet our ongoing strategic objectives. As a result, we may enter markets in which we have no or limited prior experience and may encounter difficulties in divesting businesses that no longer meet our objectives.

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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 additional 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 new and adjacent markets, such as photovoltaic cells, flat panel displays, magnetic and optical storage devices and fiberoptic cables for telecommunications. Our ability to grow our business could be limited if we are unable to execute on this strategy.

### ***Risks Related to Our Borrowings***

#### **Our Restated Credit Agreement contains financial covenants that we may not be able to meet.**

Our amended and restated credit agreement (the "Restated Credit Agreement") among us and Poco Graphite, Inc. ("Poco"), as borrowers, Wells Fargo Bank, National Association, as agent, and certain other banks, as lenders, contains various financial covenants that limit our capital equipment purchases to no more than \$20 million in both 2010 and 2011 plus certain unused amounts from the prior period (\$7.2 million for fiscal 2010); requires that we maintain a minimum level of cash in the United States; and achieve certain levels of EBITDA during the first quarter of 2010. Beginning in the second quarter of 2010, the Restated Credit Agreement requires that we maintain certain cash flow leverage and fixed charge coverage ratios. We cannot be sure that we will be able to meet these financial covenants in our Restated Credit Agreement.

The financial covenants in our Restated Credit Agreement measure our EBITDA over time. If our revenues are not sufficient, we could be required to significantly reduce operating expenses in order to comply with these financial covenants. We cannot assure you that we will be successful in generating sufficient revenues or implementing additional operating expense reductions (if needed) on a timely basis, or at all, that any actions we take would be sufficient to avoid a default under the Restated Credit Agreement, or that any additional operating expense reductions will not have a lasting material adverse impact on our results of operations or long-term business prospects. Furthermore, if management is unsuccessful in implementing sufficient additional operating expense reductions or otherwise ensuring that we are in compliance with the financial covenants in our Restated Credit Agreement, after the expiration of applicable notice or grace periods, the lenders could accelerate any amounts outstanding under the Restated Credit Agreement and exercise their other remedies. In addition, we may not be able to refinance such indebtedness through the proceeds of debt or equity issuances or otherwise, on reasonable terms, on a timely basis, or at all.

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

As of December 31, 2009 we had \$69 million of cash and cash equivalents which represented a decrease of \$46 million from the \$115 million of cash and cash equivalents that we had as of December 31, 2008. We generated \$4 million of net cash to conduct our business operations during fiscal 2009; this compares with \$66 million of

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positive cash generated by our business operations during fiscal 2008. As of December 31, 2009 we had drawn \$52 million under the Restated Credit Agreement. 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 seek additional 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.

In addition, if we are unable to meet the financial covenants under the Restated Credit Agreement, then we will be in default and our lenders may pursue their remedies under the Restated Credit Agreement including taking control of our domestic cash receipts from the collection of our receivables as well as certain other assets. In this event, the Company's ability to conduct business could be severely impeded as there can be no assurance that funds adequate in amount and timing would be available to meet the Company's liquidity requirements.

### **We may need to raise additional capital or sell assets in order to pay off the balance on our Restated Credit Agreement when it becomes due in November 2011.**

Obligations under our Restated Credit Agreement are due in November 2011. To the extent that our cash flows from operations are not adequate to pay off the balance on our Restated Credit Agreement, we will be required to raise additional debt or equity capital (including convertible securities) or sell our assets. We cannot assure you that if such additional capital or funds were necessary, they would be available on reasonable terms, on a timely basis or at all.

### **Our Restated Credit Agreement contains restrictions that limit our flexibility in raising capital and operating our business.**

Our Restated Credit Agreement restricts our ability to raise additional capital, requires that we use the proceeds of certain permitted financings to repay amounts outstanding under our Restated Credit Agreement and provides for a reduction in our borrowing base following certain permitted financings.

The borrowing base under our Restated Credit Agreement supports up to \$106.6 million in outstanding borrowings as of December 31, 2009. Our ability to borrow could be further restricted if the levels of our qualifying U.S. accounts receivable and inventories and/or the value of our property plant and equipment were to decline from current levels, including the step downs provided in the Restated Credit Agreement. Our Restated Credit Agreement also contains various covenants that limit our ability to engage in specified types of transactions including, among other things, our ability to:

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

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The limitations described above may prevent us from engaging in transactions which might otherwise be beneficial to us. Further, a breach of any of the covenants contained in our Restated Credit Agreement could result in a default under the Restated Credit Agreement. If any such default occurs, the lenders under our Restated Credit Agreement may elect, after the expiration of any applicable notice or grace periods, to declare all outstanding borrowings, together with accrued and unpaid interest and other amounts payable thereunder, to be immediately due and payable. The lenders under our Restated Credit Agreement also have the right to terminate any commitments they have to provide further borrowings. In addition, following an event of default under the Restated Credit Agreement, the lenders have the right to proceed against the collateral granted to them to secure our obligations under the Restated Credit Agreement, including receivables from the sale of our products and certain other assets, which could severely impede our ability to operate our business. If our obligations under the Restated Credit Agreement were accelerated, our assets may not be sufficient to repay our obligations in full and we cannot assure you that we would be able to refinance such debt on reasonable terms, on a timely basis or at all.

### **Our significant level of debt, including debt outstanding under our Restated Credit Agreement, could have important consequences for our business and any investment in our securities.**

As of December 31, 2009, we had outstanding total indebtedness of \$72 million. This indebtedness could have important consequences for our business and any investment in our securities, including:

- increasing our vulnerability to adverse economic, industry or competitive developments;
- requiring a substantial portion of our cash flow from operations to be dedicated to the payment of principal and interest on our indebtedness, therefore reducing our ability to use our cash flow to fund our operations, capital expenditures and future business opportunities;
- making it more difficult for us to satisfy our obligations with respect to our indebtedness; restricting us from making strategic acquisitions or causing us to make non-strategic divestitures;
- exposing us to the risk of increased interest rates as our borrowings are at variable rates of interest;
- limiting our ability to obtain additional financing for working capital, capital expenditures, product development, debt service requirements, acquisitions and general corporate or other purposes; and
- limiting our flexibility in planning for, or reacting to, changes in our business or market conditions and placing us at a competitive disadvantage compared to our competitors who are less highly leveraged and who therefore, may be able to take advantage of opportunities that our leverage prevents us from exploiting.

### ***Manufacturing Risks***

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

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

In addition, suppliers may discontinue production of polymers specified in certain of our products, requiring us in some instances to certify an alternative with our customers. If we are unable to obtain an adequate quantity of such supplies for any 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.



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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 renew our agreement with Millipore or secure a replacement manufacturing facility.**

The Third Amended and Restated Membrane Manufacturing Agreement (the "Membrane Agreement") between us and Millipore Corporation, dated October 13, 2009, 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 December 31, 2012. In the event that we are unable to renew the Membrane Agreement, we will have to secure and outfit a replacement membrane manufacturing plant which could require significant lead time and capital investment.

### **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 \$35.0 million, \$40.1 million and \$39.7 million of engineering, research and development expense in 2009, 2008 and 2007, 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 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 or future initiatives will be successful in achieving the cost savings that we anticipate.

**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 are engaged in multiple patent litigations with Pall Corporation. We intend to prosecute and defend these cases vigorously and expect that these lawsuits will continue for extended periods of time and that we will incur substantial costs in pursuing them. In addition it may become necessary for us to initiate other costly patent litigation against this or other competitors in order to protect and/or perfect our intellectual property rights. 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. For information concerning certain litigation brought by Pall Corporation against us, see “Item 3, “Legal Proceedings” below. We cannot predict how any existing or future litigation will be resolved or what their impact will be on us.

### *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 2009, 71% of our net sales in 2008, and 74% of our net sales in 2007. 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

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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 months, 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

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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 tightening of credit in financial markets adversely affects the ability of our customers and suppliers to obtain financing for significant purchases and operations and could result in a decrease in orders and spending for our products and services. We are unable to predict 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 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 increases.

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

Terrorist attacks may negatively affect our operations and 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 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 2009, the closing price of our stock on The NASDAQ Global Select Market ("NASDAQ") ranged from a low of \$0.52 to a high of \$5.62 and in fiscal year 2008, the closing price of our stock on NASDAQ ranged from a low of \$1.04 to a high of \$8.76.

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 liquidity and our ability to repay the obligations under our Restated Credit Agreement when it comes due; 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 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-lived 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. 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



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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 debt service.

### **Item 1B. Unresolved Staff Comments.**

Not Applicable.

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### **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, Malaysia and South Korea. Information about our principal facilities is set forth below:

<u>Location</u>	<u>Principal Function</u>	<u>Approximate Square Feet</u>	<u>Leased/Owned</u>
Chaska, Minnesota	Executive Offices, Research & Manufacturing <sup>(1) (2) (3)</sup>	370,000	Owned <sup>(4)</sup>
Billerica, Massachusetts	Executive Offices, Research & Manufacturing <sup>(1)</sup>	175,000	Leased <sup>(5)</sup>
Colorado Springs, Colorado	Manufacturing <sup>(2)</sup>	82,000	Owned
Decatur, Texas	Manufacturing <sup>(3)</sup>	359,000	Owned
Montpellier, France	Cleaning Services <sup>(2)</sup>	53,000	Owned
Yonezawa, Japan	Manufacturing <sup>(1) (2)</sup>	196,000	Owned
Kulim, Malaysia	Manufacturing <sup>(1) (2)</sup>	195,000	Owned

(1) Facility used by our Contamination Control Solutions Division.

(2) Facility used by our Microenvironments Division.

(3) Facility used by our Entegris Specialty Materials Division.

(4) In the fourth quarter of 2009, we closed one of these buildings, comprising 178,000 square feet. The building is currently being marketed for sale.

(5) This lease expires March 31, 2014, but is subject to two five-year renewal options.

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 Third Amended and Restated Membrane Manufacturing and Supply Agreement that expires December 31, 2012. 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 11,000 square feet of office, research and development and manufacturing space in two buildings located in Burlington, Massachusetts which we acquired in connection with our acquisition of a specialty coatings business. These leases are for a term expiring December 31, 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 23,000 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. However, many of our facilities were utilized below our normal range of production volume during 2009 due to historically low business levels.

### **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, 2009.

As previously disclosed, on March 3, 2003 the Company's predecessor, Mykrolis Corporation, filed a lawsuit against Pall Corporation in the United States District Court for the District of Massachusetts alleging infringement of two of the Company's U.S. patents by certain fluid separation systems and related assemblies used in photolithography applications manufactured and sold by the defendant. The Company's lawsuit sought a preliminary injunction preventing the defendant from the manufacture, use, sale, offer for sale or importation into

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

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

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

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

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

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

None.

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

Entegris' Common Stock, \$0.01 par value, trades on the NASDAQ National Market System (NMS) under the symbol "ENTG". The following table sets forth the highest and lowest sale prices of the Company shares during fiscal 2009 and 2008. As of February 19, 2010 there were 1,380 shareholders of record.

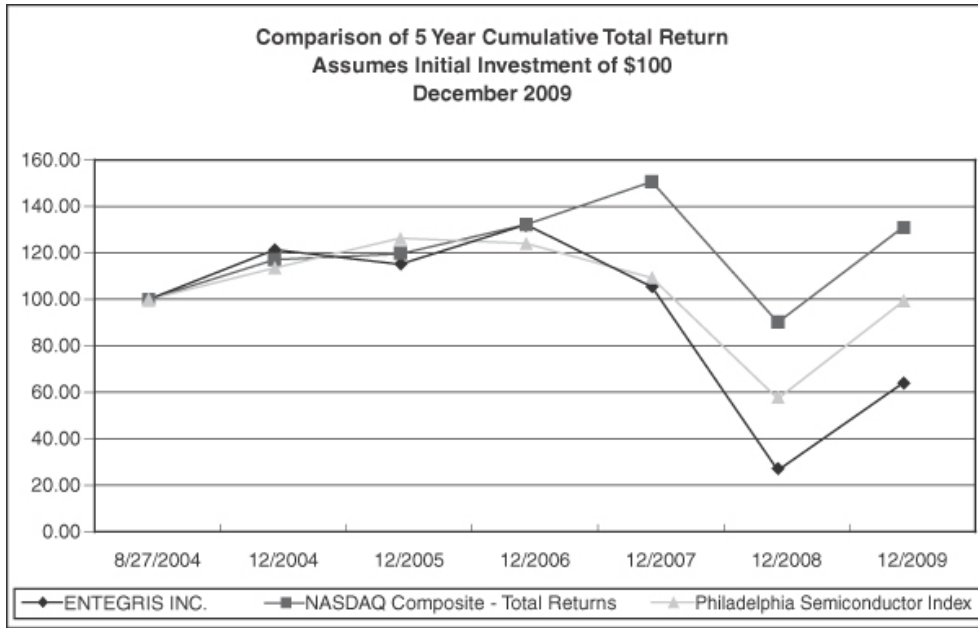
	Fiscal 2009		Fiscal 2008	
	High	Low	High	Low
First quarter	\$2.55	\$0.50	\$8.76	\$6.39
Second quarter	\$3.43	\$0.85	\$8.05	\$6.56
Third quarter	\$4.56	\$2.53	\$7.10	\$4.49
Fourth quarter	\$5.75	\$3.55	\$4.94	\$1.04

The Company has never declared or paid any cash dividends on its capital stock. The Company currently intends to retain all available earnings for use in its business operations and debt service and does not anticipate paying any cash dividends in the foreseeable future. In addition, the Company's credit agreement restricts the Company's ability declare dividends or redeem or repurchase capital stock. 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 and authorized the issuance of Rights in connection with future issuances of Entegris common stock. 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.

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**Comparative Stock Performance**

The following graph compares the cumulative total shareholder return on the common stock of Entegris, Inc. from August 27, 2004 through December 31, 2009 with cumulative total return of (1) The NASDAQ Composite Index (NASDAQ), and (2) The Philadelphia Semiconductor Index (SOX), assuming \$100 was invested at the close of trading August 27, 2004 in Entegris, Inc. common stock, the NASDAQ Composite Index and the Philadelphia Semiconductor Index and that all dividends are reinvested.



	August 27, 2004	December 31, 2004	December 31, 2005	December 31, 2006	December 31, 2007	December 31, 2008	December 31, 2009
Entegris, Inc.	100	121.34	114.87	131.94	105.23	26.70	64.37
NASDAQ	100	117.05	119.53	131.95	150.26	90.21	131.13
SOX	100	113.42	126.13	123.94	109.06	57.49	99.35

**Issuer Purchases of Equity Securities**

None

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**Item 6. Selected Financial Data**

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

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

<i>(In thousands, except per share amounts)</i>	Year ended December 31, 2009	Year ended December 31, 2008	Year ended December 31, 2007	Year ended December 31, 2006	Four months ended December 31, 2005	Year ended August 27, 2005
<b>Operating Results</b>						
Net sales	\$ 398,644	\$ 554,699	\$ 626,238	\$ 672,882	\$ 199,644	\$ 347,345
Gross profit	137,812	211,515	266,237	305,078	70,207	138,183
Selling, general and administrative expenses	117,001	147,531	163,918	170,702	71,297	105,281
Engineering, research and development expenses	35,039	40,086	39,727	38,074	13,904	18,188
Amortization of intangible assets	19,237	19,585	18,874	17,609	5,956	5,060
Impairment of goodwill	—	473,799	—	—	—	—
Restructuring charges	15,463	10,423	—	—	—	—
Operating (loss) profit	(48,928)	(479,909)	43,718	78,693	(20,950)	9,654
(Loss) income before income taxes and equity in affiliate earnings	(59,888)	(496,413)	56,619	89,556	(18,572)	14,307
Income (benefit) tax expense	(2,996)	19,201	10,356	26,936	(8,713)	1,154
(Loss) income from continuing operations	(57,759)	(515,897)	46,356	63,151	(9,789)	12,906
Net (loss) income attributable to Entegris, Inc.	\$ (57,721)	\$ (517,002)	\$ 44,359	\$ 63,466	\$ (18,324)	\$ 9,393
<b>Earnings Per Share Data</b>						
Diluted (loss) earnings per share—continuing operations	\$ (0.49)	\$ (4.58)	\$ 0.37	\$ 0.45	\$ (0.07)	\$ 0.16
Weighted average shares outstanding—diluted	117,321	112,653	126,258	138,872	135,437	79,453
<b>Operating Ratios—% of net sales</b>						
Gross profit	34.6%	38.1%	42.5%	45.3%	35.2%	39.8%
Selling, general and administrative expenses	29.3	26.6	26.2	25.4	35.7	30.3
Engineering, research and development expenses	8.8	7.2	6.3	5.7	7.0	5.2
Amortization of intangible assets	4.8	3.5	3.0	2.6	3.0	1.5
Impairment of goodwill	—	85.4	—	—	—	—
Restructuring charges	3.9	1.9	—	—	—	—
Operating (loss) profit	(12.3)	(86.5)	7.0	11.7	(10.5)	2.8
(Loss) income before income taxes and equity in affiliate earnings	(15.0)	(89.5)	9.0	13.3	(9.3)	4.1
Effective tax rate	5.0	(3.9)	18.3	30.1	46.9	8.1
Net (loss) income attributable to Entegris, Inc.	(14.5)	(93.2)	7.1	9.4	(9.2)	2.7

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<i>(In thousands, except per share amounts)</i>	Year ended December 31, 2009	Year ended December 31, 2008	Year ended December 31, 2007	Year ended December 31, 2006	Four months ended December 31, 2005	Year ended August 27, 2005
<b>Cash Flow Statement Data</b>						
Depreciation and amortization	\$ 50,127	\$ 46,343	\$ 43,776	\$ 42,905	\$ 13,754	\$ 23,599
Capital expenditures	13,162	26,987	26,919	30,860	10,311	19,472
Net cash provided by operating activities	4,193	66,260	132,017	96,076	22,598	52,323
Net cash (used in) provided by investing activities	(9,843)	(199,921)	50,800	(17,370)	(13,116)	58,807
Net cash (used in) provided by financing activities	<u>\$ (40,690)</u>	<u>\$ 82,681</u>	<u>\$ (183,061)</u>	<u>\$ (80,037)</u>	<u>\$ (15,432)</u>	<u>\$ 3,066</u>
<b>Balance Sheet and Other Data</b>						
Current assets	\$ 267,458	\$ 313,128	\$ 382,621	\$ 556,321	\$ 516,364	\$ 546,502
Current liabilities	73,910	79,356	125,749	92,699	111,017	124,856
Working capital	193,548	233,772	256,872	463,622	405,347	421,646
Current ratio	3.62	3.95	3.04	6.00	4.65	4.38
Long-term debt	52,492	150,516	20,373	2,995	3,383	21,800
Shareholders' equity	346,192	336,170	852,309	1,015,980	1,012,819	1,023,414
Total assets	<u>\$ 504,672</u>	<u>\$ 597,824</u>	<u>\$ 1,035,241</u>	<u>\$ 1,157,618</u>	<u>\$ 1,142,790</u>	<u>\$ 1,185,620</u>
Return on average shareholders' equity—%	(16.9)	(87.0)	4.7	6.3	(1.8)	1.3
Shares outstanding at end of period	<u>130,043</u>	<u>113,102</u>	<u>115,356</u>	<u>132,771</u>	<u>136,044</u>	<u>135,299</u>

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

*You should read the following discussion and analysis of the Company’s consolidated financial condition and results of operations 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 (TFT-LCD) and hard disk manufacturers, which are served through direct sales efforts, as well as sales and distribution relationships, in the United States, Asia, Europe and the Middle East.

The Company offers a diverse product portfolio which includes more than 15,000 standard and customized products that 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 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.

**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 cyclicalities, technological change and substantial competition, including pricing pressures and foreign currency effects.
- **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.



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- **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, 2009**

The Company's financial results for the year ended December 31, 2009 were significantly affected by the difficult 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. 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.

Net sales for 2009 were \$398.6 million, down 28.1%, from net sales of \$554.7 million reported for 2008. 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.

In the Company's view, the business and industry downturn reached a trough during the first quarter of 2009. During the second quarter, the Company began to experience a modest upturn in bookings and sales of certain of its unit-driven, consumable products, while 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 has been nominal.

Mainly reflecting the significant year-over-year sales decrease and associated lower factory utilization, the Company reported considerably lower gross profits and a reduced gross margin. The Company's gross margin in 2009 was 34.6% versus 38.1% in 2008.

The Company had lower year-over-year selling, general and administrative (SG&A) and engineering, research and development (ER&D) costs for 2009 when compared to 2008, mainly reflecting lower salary, incentive and benefits costs resulting from headcount reductions, temporary pay reductions and furloughs.

The Company incurred restructuring charges of \$15.5 million in 2009, mainly in connection with business restructuring activities related to the transfer of a portion of our Chaska, Minnesota production to Malaysia and other existing facilities, and actions taken in response to the downturn in the semiconductor industry.

As a result of aforementioned factors, the Company reported a loss from continuing operations of \$57.8 million for 2009 compared to a loss of \$515.9 million in 2008. The 2008 loss was substantially attributable to goodwill impairment charges of \$473.8 million (\$454.6 million, net of tax) as discussed in below section titled "Impairment of Goodwill".

Because of the difficult business environment described above, the Company projected early in 2009 that it would violate the debt covenants in its then-existing revolving credit facility. Accordingly, the Company's management, working with its banks, undertook the amendment of its revolving credit facility. In March 2009, the Company amended and restated its revolving credit facility. The restated revolving credit facility was further amended in July 2009 and August 2009 and as of December 31, 2009 supported \$106.6 million in borrowings. The Company's ability to borrow under the restated credit facility is also subject to a borrowing base, which is calculated based on the Company's level of qualifying U.S. accounts receivable, inventories and value of property, plant and equipment.

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The restated revolving credit facility requires the Company to maintain compliance with new debt covenants and to pay higher rates of interest. Through December 31, 2009, the Company was in compliance with all applicable debt covenants.

The Company's restated credit agreement contains financial covenants that limit its ability to make capital expenditures in excess of \$20.0 million in both 2010 and 2011 plus certain unused amounts from the prior period (\$7.2 million for 2010); requires that the Company maintain a minimum level of cash in the United States; and requires the Company to achieve certain levels of EBITDA performance during the first quarter of 2010. Beginning in the second quarter of 2010, the Company must maintain or exceed fixed charge coverage and cash flow leverage ratios. (Also see Note 11 to the Company's consolidated financial statements).

In September 2009, the Company issued common stock in a registered public offering, receiving net proceeds of \$56.6 million. As required by the terms of the Company's restated credit agreement, the proceeds were used to reduce the amount outstanding under the Company's revolving credit facility.

During 2009, the Company's operating activities provided cash flow of \$4.2 million. Cash and cash equivalents were \$68.7 million at December 31, 2009 compared with \$115.0 million at December 31, 2008. The decrease in cash mainly reflects the \$95.0 million reduction of debt, partially offset by proceeds of the registered public offering.

### **Critical Accounting Policies**

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

**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 \$1.7 million and \$1.3 million at December 31, 2009 and 2008, respectively.

An allowance for sales returns and allowances is established based on historical and current trends in product returns. At December 31, 2009 and 2008, the Company's reserve for sales returns and allowances was \$0.9 million and \$1.9 million, respectively.

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**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 \$9.1 million and \$8.3 million at December 31, 2009 and 2008, 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, 2009, the Company had \$135.4 million of net property, plant and equipment and \$78.5 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.

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. As required under U.S. generally accepted accounting principles, the impairment analyses for the third and fourth quarters of 2008 occurred before the goodwill impairment assessments.

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

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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).

The Company's estimate of undiscounted cash flows attributable to the asset groups included only future cash flows (cash inflows less associated cash outflows) that are directly associated with and that are expected to arise as a direct result of the use and eventual disposition of the asset group. Estimates of future cash flows used to test the recoverability of a long-lived asset (asset group) incorporated the Company's assumptions about its use of the asset group and were determined for the remaining useful life of the primary asset (the principal long-lived tangible asset being depreciated or intangible asset being amortized that is the most significant component asset from which the asset group derives its cash-flow-generating capacity) of each asset group. The key assumptions were projected revenues, gross margin expectations and operating cost estimates. Future cash flows used to test the recoverability of each asset group were made for the remaining useful life of the asset group, which itself is based on the remaining useful life of the primary asset of each group as described below. Where the primary asset is not the asset of the asset group with the longest remaining useful life, estimates of future cash flows for the group assume the sale of the group at the end of the remaining useful life of the primary asset.

The recoverability test included all cash outflows that the asset group is estimated to incur to obtain the estimated future cash inflows. Accordingly, where required, the Company reflected within the cash flows of its asset groups an allocation of corporate expenses to its asset groups, because those assets require the services provided by the Company's shared services infrastructure (among others, finance, human resources, information technology, sales and marketing, legal) if the asset group were operated on a stand-alone basis.

Under the first quarter 2009 impairment test, all asset groups had future undiscounted cash flows in excess of their carrying values by at least 60%, except for the ME asset group, which the Company estimated had future undiscounted cash flows 27% higher than its carrying value. The carrying values of this asset group's property, plant and equipment and intangible assets at March 28, 2009 were \$42.9 million and \$1.2 million, respectively. If either revenue for the Company's asset groups decreased from the then-current forecast without offsetting decreases in costs, or if the asset group's operating costs increased from the then-current forecast without offsetting increases in revenue, the estimated undiscounted future cash flows of the asset groups could have been less than their carrying values. This would have required an impairment loss to be recognized based on the excess of the carrying amount of the respective asset group over its fair value. As noted, fair value would be determined by discounting estimated future cash flows, appraisals or other methods deemed appropriate. Actual results of the ME asset group for the nine-month period ended December 31, 2009 were better than forecasted at the end of the first quarter.

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, particularly in the current economic environment and forecast of 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.

Based on improved economic conditions within the semiconductor industry and the absence of any other triggering events, the Company was not required to perform impairment testing for any of its asset groups for the second, third and fourth quarters of 2009. Due to the uncertain economic environment within the semiconductor industry, the Company will continue to monitor circumstances and events to determine whether additional asset

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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.

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

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

In 2008, the Company tested for impairment its goodwill in connection with its annual impairment test of goodwill as of August 31, 2008, and due to events and changes in circumstances through the end of 2008, the Company had additional triggering events that indicated impairments had occurred.

Based on the results of the Company's 2008 assessment of goodwill for impairment, it was determined that the carrying value of the Company's net assets exceeded its estimated fair value. Accordingly, the Company performed a second step of the impairment test to determine the implied fair value of its goodwill. The Company performed the assessment of impairment of its goodwill twice during the year, once during the third quarter, when the Company wrote off \$379.8 million of goodwill, and the second time at the end of the year, when the Company wrote off its remaining goodwill of \$94.0 million. (See Note 2 to the consolidated financial statements.)

The Company had no goodwill recorded on its consolidated balance sheet as of December 31, 2009.

**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.

As a result of the recent general economic and industry declines, and their impact on the Company's future outlook, management has reviewed its U.S. deferred tax assets and concluded that the uncertainties related to the realization of its deferred tax assets have become unfavorable. The Company had U.S. net deferred tax asset positions of \$57.2 million and \$42.3 million as of December 31, 2009 and 2008, respectively, which comprised temporary differences and various credit carryforwards. Management has concluded that it is not more likely than not that the Company will realize the net deferred tax assets. Accordingly, the Company maintained valuation allowances of \$57.2 million and \$42.1 million as of December 31, 2009 and 2008, respectively, with respect to U.S. deferred tax assets.

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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.

The Company had net non-U.S. deferred tax asset positions before valuation allowance of \$14.9 million and \$12.5 million as of December 31, 2009 and 2008, 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 \$0.4 million and \$0.6 million as of December 31, 2009 and 2008, 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, 2009 and 2008, the Company's accrual for estimated future warranty costs was \$0.9 million and \$1.1 million, respectively.

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

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

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

**Share-Based Compensation** 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 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.

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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.

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

## Results of Operations

### 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.

<u>(Dollars in thousands)</u>	2009		2008	
		<u>% of net sales</u>		<u>% of net sales</u>
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	<u>(57,759)</u>	<u>(14.5)</u>	<u>\$(515,897)</u>	<u>(93.0)</u>

**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 difficult global economic conditions and, more specifically, the severe downturn in both the capital and unit-driven segments of the

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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.

In the Company's view, the business and industry downturn reached a trough during the first quarter of 2009. During the second quarter, the Company began to experience a modest upturn in bookings and sales of certain of its unit-driven, consumable products, while 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 has been 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 were 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 compares 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 reflects 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 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.



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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 2.8% of the 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 percentage.

**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 includes 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 the assessment of impairment of its goodwill twice during 2008, once in connection with its annual impairment test of goodwill and due to events and changes in circumstances through the end of the fourth quarter of 2008 the Company had a second trigger event that indicated impairments had occurred. 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 has 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 13 to the Company's consolidated financial statements for additional detail.

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**Interest expense (income), net** Net interest expense was \$9.2 million in 2009 compared to net interest expense of \$1.0 million in 2008. The variance 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 (income)** 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 includes 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 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 is not more likely than not that the Company will 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 is principally attributable to two factors. The Company recorded a \$473.8 million goodwill impairment charge in 2008. Most of the Company's goodwill impairment charge is not deductible for income tax purposes. Accordingly, the Company recognized a tax benefit of only \$19.2 million in connection with the impairment charge.

Also during 2008, the Company recorded a \$42.7 million valuation allowance against its deferred tax assets consisting primarily of net operating loss carryovers, general business carryovers and foreign tax credit carryforwards, \$0.6 million of which related to discontinued operations. The Company carried no valuation allowance against its deferred tax assets at December 31, 2007. As a result of the 2008 general 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).

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### Segment Analysis

Effective January 1, 2009, the Company changed its financial reporting structure reflecting organizational changes. Beginning in 2009, the Company will report 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 21 "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 (loss) data for the Company's three segments, for the years ended December 31, 2009 and 2008.

<i>(In thousands)</i>	2009	2008
<b>Contamination Control Solutions</b>		
Net sales	\$ 241,163	\$ 330,810
Segment profit	30,846	77,024
<b>Microenvironments</b>		
Net sales	\$ 111,465	\$ 190,761
Segment profit	4,066	24,276
<b>Entegris Specialty Materials</b>		
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 comparable period last year. The changes in net sales reflect the underlying economic and semiconductor industry conditions noted above.

CCS reported a segment profit of \$30.8 million for the year ended December 31, 2009 compared to a \$77.0 million segment profit in the comparable period last year, a decrease of 60%.

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, CCS operating expenses decreased 15%, 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 comparable period last year. The changes in net sales reflect the underlying overall economic and semiconductor industry conditions noted above.

ME reported segment income of \$4.1 million for the year ended December 31, 2009 compared to a \$24.3 million segment profit in the comparable period last year, a decrease of 83%.

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 20%, mainly due to lower selling and engineering, research and development costs.

#### **Entegris Specialty Materials (ESM)**

For the year ended December 31, 2009, ESM net sales increased 39%, to \$46.0 million, from \$33.1 million in the comparable period last year. The year ended December 31, 2009 reflected the full-year inclusion of net sales from POCO. Excluding that factor, sales fell 29% in 2009 when compared to 2008.

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ESM 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-capacity production levels at POCO associated with manufacturing production falling below normal capacity.

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

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

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

**Net sales** For the year ended December 31, 2008, net sales were \$554.7 million, down \$71.5 million, or 11%, from sales for the year ended December 31, 2007. The sales decline was mitigated by the inclusion of sales of \$23.3 million from POCO, which was acquired in August 2008, sales of \$5.9 million related to the full-year inclusion of sales from the specialty coatings business acquired in August 2007, and a favorable foreign currency translation effect of \$22.8 million. Excluding those factors, sales fell 20% in 2008 compared to 2007. The currency effect reflected the strengthening of most international currencies versus the U.S. dollar, most notably the Japanese yen and the Euro. On a geographic basis, total sales to North America were 29%, Asia Pacific 34%, Europe 16% and Japan 21% in 2008.

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

Sales of unit-driven products fell 5% in 2008. Excluding sales of POCO, sales of unit-driven products fell 11% in 2008. Unit-driven products have average lives of less than 18 months or need to be replaced based on usage levels. These products include liquid filters used in the photolithography, CMP and wet etch and clean processes,

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and wafer shippers used to ship raw wafers, particularly at wafer sizes of 150mm and below, as well as chip trays and data storage components used to ship 65mm and 95mm disk drives. Sales of shippers declined 13%, partially offset by the increase in sales of 300mm wafer shippers of 181%. In addition, sales of filtration products declined by 11%.

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

**Gross profit** Gross profit for 2008 decreased by \$54.7 million, to \$211.5 million, a decrease of 21% from \$266.2 million for 2007. The gross margin rate for 2008 was 38.1% versus 42.5% for 2007.

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

Gross margin in 2008 included a \$13.5 million incremental charge associated with the fair market value write-up of inventory acquired in the acquisition of POCO. This incremental charge had a negative 2.4% impact on the overall gross margin for 2008. The inventory write-up was recorded as part of the purchase price allocation and is charged to cost of sales over inventory turns of the acquired inventory.

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

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

**Engineering, research and development expenses** Engineering, research and development (ER&D) expenses rose by \$0.4 million, or 1%, to \$40.1 million in 2008 compared to \$39.7 million in 2007. ER&D expenses as a percent of net sales were 7.2% compared to 6.3% a year ago.

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

**Impairment of Goodwill** The Company performed the assessment of impairment of its goodwill twice during 2008, once in connection with its annual impairment test of goodwill and due to events and changes in circumstances through the end of the fourth quarter of 2008, the Company had a second trigger event that indicated impairments had occurred. In addition, the Company tested for impairment of its long-lived assets.

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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, 2008, the Company had no remaining goodwill.

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

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

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

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

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

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

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

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### **Discontinued operations**

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

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

**Net (loss) income** The Company recorded a net loss of \$517.0 million, or \$4.59 per share, in 2008, compared to net income of \$44.4 million, or \$0.35 per diluted share, in 2007. The Company's loss from continuing operations for 2008 was \$515.9 million, or \$4.58 per share, compared to income from continuing operations of \$46.4 million, or \$0.37 per diluted share, in the prior year.

### **Segment Analysis**

The following table presents selected sales and segment profit data for the Company's three segments for the years ended December 31, 2008 and 2007:

<i>(In thousands)</i>	<u>2008</u>	<u>2007</u>
<b>Contamination Control Solutions</b>		
Net sales	\$ 330,810	\$ 382,182
Segment profit	77,024	109,725
<b>Microenvironments</b>		
Net sales	\$ 190,761	\$ 235,168
Segment profit	24,276	40,804
<b>Entegris Specialty Materials</b>		
Net sales	\$ 33,128	\$ 8,888
Segment profit	9,250	1,102

#### **Contamination Control Solutions (CCS)**

For the year ended December 31, 2008, CCS net sales decreased 13% to \$330.8 million from \$382.2 million in 2007, reflecting the downturn in the semiconductor industry that began during the second half of 2008. The decline reflected decreased demand for liquid filtration products and chemical containers, which was driven by lower semiconductor fab utilization rate. Sales of unit-driven filtration products declined by 11%. Sales of CCS capital-driven products, such as photochemical pumps, fluid handling products, and gas purification systems also fell. Sales of control systems declined by 20% due to lower sales of dispense pumps, which fell by 48%, while sales of filtration products fell by 16%.

CCS reported a segment profit of \$77.0 million in 2008 compared to a \$109.7 million segment profit in 2007. The 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. CCS operating expenses decreased 2%, mainly due to lower selling costs.

#### **Microenvironments (ME)**

For the year ended December 31, 2008, ME net sales decreased 19% to \$190.8 million from \$235.2 million in 2007, also reflecting the downturn in the semiconductor industry that began during the second half of 2008. The decline reflected decreased demand for wafer shippers used to ship raw wafers, particularly at wafer sizes of

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150mm and below, as well as in chip trays and data storage components used to ship 65mm and 95mm disk drives. Sales of shippers declined 13%, partially offset by the increase in sales of 300mm wafer shippers of 181%.

ME reported a segment profit of \$24.3 million in 2008 compared to a \$40.8 million segment profit in 2007. The 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. ME operating expenses decreased 7%, due to lower selling costs offset partly by higher engineering, research and development costs.

### **Entegris Specialty Materials (ESM)**

For the year ended December 31, 2008, ESM net sales increased 273% to \$33.1 million from \$8.9 million in 2007. The sales increase reflected the inclusion of sales of \$23.3 million from POCO, which was acquired in August 2008 and sales of \$5.9 million related to the full-year inclusion of sales from the specialty coatings business acquired in August 2007.

ESM reported a segment profit of \$9.3 million in 2008 compared to a \$1.1 million segment profit in 2007. The inclusion of POCO results and the full-year inclusion of results of the specialty coatings business accounted for the increase in segment profit.



**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, 2009. 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)**

<i>(In thousands)</i>	2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Net sales	\$ 148,227	\$ 147,947	\$ 145,789	\$ 112,736	\$ 59,038	\$ 82,576	\$ 110,706	\$ 146,324
Gross profit	63,988	59,887	55,398	32,242	5,018	23,730	44,777	64,287
Selling, general and administrative expenses	43,322	37,105	35,373	31,731	29,721	25,685	29,175	32,420
Engineering, research and development expenses	10,501	10,362	10,284	8,939	8,904	7,843	8,575	9,717
Amortization of intangible assets	5,087	4,552	4,858	5,088	4,981	4,931	4,723	4,602
Impairment of goodwill	—	—	379,810	93,989	—	—	—	—
Restructuring charges	—	—	3,332	7,091	4,634	5,452	2,368	3,009
Operating profit (loss)	5,078	7,868	(378,259)	(114,596)	(43,222)	(20,181)	(64)	14,539
Net income (loss) attributable to Entegris, Inc.	2,865	4,933	(393,002)	(131,798)	(37,745)	(22,492)	(7,608)	10,124
<i>(Percent of net sales)</i>	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	43.2	40.5	38.0	28.6	8.5	28.7	40.4	43.9
Selling, general and administrative expenses	29.2	25.1	24.3	28.1	50.3	31.1	26.4	22.2
Engineering, research and development expenses	7.1	7.0	7.1	7.9	15.1	9.5	7.7	6.6
Amortization of intangibles	3.4	3.1	3.3	4.5	8.4	6.0	4.3	3.1
Impairment of goodwill	—	—	260.5	83.4	—	—	—	—
Restructuring charges	—	—	2.3	6.3	7.8	6.6	2.1	2.1
Operating profit (loss)	3.4	5.3	(259.5)	(101.6)	(73.2)	(24.4)	(0.1)	9.9
Net income (loss) attributable to Entegris, Inc.	1.9	3.3	(269.6)	(116.9)	(63.9)	(27.2)	(6.9)	6.9

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

The Company's financial results for the two-year period ended December 31, 2009 were significantly affected by the difficult 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. 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 the Company's sales 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.

The variability in sales was the key factor underlying the changes in the Company's gross profit over the past eight quarters. In the third and fourth quarters of 2008, the Company's results included goodwill impairment losses of \$379.8 million and \$94.0 million, respectively. The third and fourth quarter of 2008, as well as the first quarter of 2009, also included incremental charges of \$5.7 million, \$7.8 million and \$4.1 million, respectively,

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associated with the write-up of acquired inventories to fair value. In addition, the Company incurred restructuring charges associated with the restructuring of its sales and marketing function, manufacturing operations, and realignment of its global supply chain and other ancillary operational functions during the latter half of 2008 and throughout 2009. All of these factors contributed to widely fluctuating quarterly results, including periods with significant net losses, for the Company.

### **Liquidity and Capital Resources**

The Company has historically financed its operations and capital requirements through cash flow from operating activities, long-term loans, lease financing and borrowings under domestic and international short-term lines of credit. 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 \$4.2 million for the year ended December 31, 2009. Cash flow provided by the Company's operations, net of various non-cash charges, includes depreciation and amortization of \$50.1 million, share-based compensation expense of \$8.1 million, and a \$4.6 million incremental charge associated with the fair market value write-up of inventory acquired in the acquisition of POCO and Pureline. The net impact of changes in operating assets and liabilities, mainly reflecting an increase in accounts receivable and a decline in inventory, also partially offset the cash provided by operations.

Working capital stood at \$193.5 million at December 31, 2009, including \$68.7 million in cash and cash equivalents, down from \$233.8 million as of December 31, 2008, including \$115.0 million in cash and cash equivalents.

Accounts receivable, net of foreign currency translation adjustments, increased by \$19.2 million during 2009. This increase reflects an upturn in bookings and sales of the Company's products. The Company's days sales outstanding was 57 days compared to 57 days at the beginning of the year. Inventories decreased by \$10.7 million from December 31, 2008, after taking into account the impact of foreign currency translation adjustments, provision for excess and obsolete inventory, and the charge for the fair value mark-up of acquired inventory. The decrease was mainly due to the effect of the Company's worldwide efforts to reduce inventories.

Accounts payable and accrued expenses were \$1.6 million lower than a year ago. This decrease mainly reflects the timing of payments compared to that of 2008. Income taxes payable and refundable income taxes increased by \$0.5 million in 2009, with the Company receiving refunds net of payments of \$2.8 million.

**Investing activities** Cash flow used in investing activities totaled \$9.8 million in 2009. Expenditures for the acquisition of property and equipment totaled \$13.2 million, primarily for additions related to manufacturing equipment, tooling and information systems. The Company sold a building that was classified as an asset held for sale for \$2.3 million in the third quarter of 2009. The Company expects its capital expenditures in 2010 to be approximately \$20 million. Under its amended credit facility, the Company is restricted from making capital expenditures in excess of \$20.0 million in both 2010 and 2011 plus certain unused amounts from the prior period (\$7.2 million for 2010). The Company does not anticipate that this limit on capital expenditures will have an adverse effect on the Company's operations.

On July 31, 2009, Entegris acquired an additional 30% equity interest of Pureline Co., Ltd. (Pureline), a privately held company located in Munmak, South Korea and manufacturer of fluid handling products. The purchase price of the 30% equity interest was \$4.3 million. The Company paid \$1.1 million in cash and executed a note to the seller for \$3.2 million, payable in three installments through April 2010.

**Financing activities** Cash used in financing activities totaled \$40.7 million in 2009.

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The Company received proceeds of \$704.7 million from new borrowings and made debt payments of \$799.6 million during 2009. The Company expended \$3.6 million for debt issuance costs related to the Company's amended revolving credit agreement. These costs are classified in other assets in the Company's consolidated financial statements and are being charged to interest expense as appropriate over the term of the agreement.

As described in Note 11 to the Company's consolidated financial statements, the Company executed a new revolving credit agreement on March 2, 2009, which was amended on July 17, 2009 and August 11, 2009 (Restated Credit Agreement). The Restated Credit Agreement expires on November 1, 2011. The initial revolving commitment amount under the Restated Credit Agreement was \$150.0 million, with \$11.0 million unavailable without consent of a majority of the Company's lenders. The revolving commitment was further subject to maintaining a borrowing base. In accordance with the terms of the Restated Credit Agreement, after the receipt of net proceeds of \$56.6 million from a registered public offering on September 16, 2009, the revolving commitment decreased by 50% of the net proceeds of the offering, or \$28.3 million, to \$121.7 million, with \$11.0 million unavailable without consent of a majority of the Company's lenders.

The Restated Credit Agreement requires that the Company meet various financial covenants. Through December 31, 2009, the Company has been in compliance with all financial covenants required by the Restated Credit Agreement. The Restated Credit Agreement requires that the Company not exceed the negative year-to-date EBITDA amounts in 2009 and that the Company exceed the positive year-to-date EBITDA amounts at prescribed levels on a monthly basis through March 2010. Beginning in the second quarter of 2010, the foregoing minimum EBITDA covenants expire, and the Restated Credit Agreement requires 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. A detailed description of these financial covenants can be found in Note 11 to the Company's consolidated financial statements.

Under the terms of the Restated Credit Agreement, the Company must also maintain a minimum of \$25.0 million in domestic cash balances and is restricted from making capital expenditures in excess of \$20.0 million in both 2010 and 2011 plus certain unused amounts from the prior period (\$7.2 million for 2010).

Notwithstanding the terms under the Restated Credit Agreement described above, the Company also has a line of credit with four banks that provide for borrowings of currencies for the Company's overseas subsidiaries, principally the Japanese yen and Korean won equivalent to an aggregate of approximately \$16.9 million. There was \$5.8 million outstanding on these lines of credit at December 31, 2009.

On June 25, 2009, the Company filed a shelf registration statement with the Securities and Exchange Commission to issue debt or equity securities at a future date. The registration statement became effective in September 2009 and on September 16, 2009 the Company received net proceeds of \$56.6 million from a registered public equity offering. As noted above, the Company used the net proceeds to reduce outstanding debt.

The Company received proceeds of \$1.3 million in connection with common shares issued under the Company's employee stock purchase plans and stock option exercises.

At December 31, 2009, the Company's shareholders' equity stood at \$346.2 million, up 3% from \$336.2 million at the beginning of the year. The increase reflected the \$56.6 million from the registered public offering and additional paid-in capital of \$8.1 million associated with the Company's share-based compensation expense. The increase was partially offset by the Company's net loss of \$57.8 million.

As of December 31, 2009, the Company's sources of available funds were \$68.7 million in cash and cash equivalents, of which the Company must maintain a minimum of \$25.0 million domestically under the terms of the Restated Credit Agreement. The Company's borrowing base under its Restated Credit Agreement supported \$106.6 million in total availability as of December 31, 2009, with \$52.4 million in borrowings and \$1.5 million undrawn on letters of credit then outstanding.

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The Company believes that its cash and cash equivalents, funds available under the Restated Credit Agreement 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**

#### *Accounting Standards Codification™*

In June 2009, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2009-01, *Generally Accepted Accounting Principles* (ASC Topic 105) which establishes the FASB Accounting Standards Codification (the Codification or ASC) as the official single source of authoritative U.S. generally accepted accounting principles (GAAP). All existing accounting standards are superseded. All other accounting guidance not included in the Codification will be considered non-authoritative. The Codification also includes all relevant Securities and Exchange Commission (SEC) guidance organized using the same topical structure in separate sections within the Codification.

Following the Codification, the Board will not issue new standards in the form of Statements, FASB Staff Positions or Emerging Issues Task Force Abstracts. Instead, it will issue Accounting Standards Updates (ASU) which will serve to update the Codification, provide background information about the guidance and provide the basis for conclusions on the changes to the Codification.

The Codification is not intended to change GAAP, but it will change the way GAAP is organized and presented. The Codification is effective for the Company's condensed consolidated financial statements as of and for the period ended September 26, 2009 and the principal impact on the financial statements is limited to disclosures as all future references to authoritative accounting literature will be referenced in accordance with the Codification. In order to ease the transition to the Codification, the Company is providing the Codification cross-reference alongside the references to the standards issued and adopted prior to the adoption of the Codification.

In December 2007, the FASB issued SFAS No. 141 (revised 2007) *Business Combinations* (ASC Topic 805). This guidance retains the fundamental requirements of the original pronouncement requiring that the purchase method be used for all business combinations and defines the acquirer as the entity that obtains control of one or more businesses in the business combination, establishes the acquisition date as the date that the acquirer achieves control and requires the acquirer to recognize the assets acquired, liabilities assumed and any noncontrolling interest at their fair values as of the acquisition date. The guidance also requires that acquisition-related costs be recognized separately from the acquisition. This guidance was effective for the Company in the first quarter of 2009 and was followed by the Company in its accounting for the acquisition described in Note 3 to consolidated financial statements.

In December 2007, the FASB issued Statement No. 160, *Noncontrolling Interests in Consolidated Financial Statements (ASC Topic 810)*. This guidance clarifies that a noncontrolling interest in a subsidiary should be reported as equity in the consolidated financial statements. Consolidated net income should include the net income for both the parent and the noncontrolling interest with disclosure of both amounts on the consolidated statement of operations. The calculation of earnings per share will continue to be based on income amounts attributable to the parent. This guidance was effective for the Company in the first quarter of 2009 and was followed by the Company in its accounting for the acquisition described in Note 3 to consolidated financial statements.

In May 2009, the FASB issued SFAS No. 165, *Subsequent Events* (ASC Topic 855). This guidance establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. This guidance was effective for the Company in the second quarter of 2009 and its adoption did not have a material impact on the Company's consolidated financial statements.

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In June 2009, the FASB issued SFAS No. 167, *Amendments to FASB Interpretation No 46(R)* (ASC Topic 810). This guidance amends 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 is effective for the Company in 2010. The Company does not expect its adoption to have a material effect on the Company's consolidated financial statements.

In October 2009, the FASB issued the following ASU No. 2009-13, *Revenue Recognition* (ASC Topic 605)—*Multiple-Deliverable Revenue Arrangements, a consensus of the FASB Emerging Issues Task Force*. This guidance modifies 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 Company is currently evaluating the impact of adopting this update on its consolidated financial statements.

### Contractual Obligations

The following table summarizes the maturities of the Company's significant financial obligations as of December 31, 2009:

<i>(In thousands)</i>	Maturity by fiscal year						
	Total	2010	2011	2012	2013	2014	Thereafter
<i>Contractual obligations related to off-balance sheet arrangements:</i>							
Operating leases	\$ 18,105	\$ 7,496	\$ 4,011	\$ 3,266	\$ 2,671	\$ 653	\$ 8
Total	<u>\$ 18,105</u>	<u>\$ 7,496</u>	<u>\$ 4,011</u>	<u>\$ 3,266</u>	<u>\$ 2,671</u>	<u>\$ 653</u>	<u>\$ 8</u>
<i>Contractual obligations reflected in the balance sheet:</i>							
Long-term debt	\$ 63,749	\$ 11,257	\$ 52,492	\$ —	\$ —	\$ —	\$ —
Short-term borrowings	8,039	8,039	—	—	—	—	—
Interest payable <sup>(1)</sup>	389	389	—	—	—	—	—
Unrecognized tax benefits <sup>(2)</sup>	615	615	—	—	—	—	—
Pension obligations	21,796	800	341	516	576	331	19,232
Total	<u>\$ 94,588</u>	<u>\$ 21,100</u>	<u>\$ 52,833</u>	<u>\$ 516</u>	<u>\$ 576</u>	<u>\$ 331</u>	<u>\$ 19,232</u>

- (1) The above table does not reflect interest payments associated with the Company's Restated Credit Agreement. The Company cannot make reasonably reliable estimates of amounts outstanding under the revolving commitment.
- (2) The Company had \$4.3 million of total gross unrecognized tax benefits at December 31, 2009. The timing of any payments associated with these unrecognized tax benefits will depend on a number of factors. Accordingly, other than \$0.6 million that is expected to be payable in 2010, the Company cannot make reasonably reliable estimates of the amount and period of potential cash settlements, if any, with taxing authorities.

### Quantitative and Qualitative Disclosure About Market Risks

Entegris' principal financial market risks are sensitivities to interest rates and foreign currency exchange rates. The Company's interest-bearing cash equivalents, long-term debt and short-term borrowings are subject to interest rate fluctuations. Most of the Company's long-term debt at December 31, 2009 carries floating rates of interest. The Company's cash equivalents are instruments with maturities of three months or less. A 100 basis point change in interest rates would potentially increase or decrease annual net income by approximately \$0.4 million annually.

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The cash flows and earnings of the Company's foreign-based operations are subject to fluctuations in foreign exchange rates. The Company occasionally uses derivative financial instruments to manage the foreign currency exchange rate risks associated with its foreign-based operations. At December 31, 2009, the Company had no outstanding forward contracts.

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

### **Impact of Inflation**

The Company's consolidated financial statements are prepared on a historical cost basis, which does not completely account for the effects of inflation. Material and labor expenses are the Company's primary costs. The cost of its materials, including polymers and stainless steel, was modestly higher in 2009 compared to 2008. Entegris expects the cost of these materials to increase slightly in 2010. Labor costs, including taxes and fringe benefits were lower in 2009 due to the Company's actions to align spending with lower sales volumes amidst the semiconductor industry's downturn. Slightly higher total labor costs can be reasonably anticipated for 2010 as the Company reinstates some the temporary cost reductions put in place in the first half of 2009. The Company's products are sold under contractual arrangements with its large customers and at current market prices to other customers. Consequently, the Company can adjust its selling prices, to the extent allowed by competition and contractual arrangements, to reflect cost increases caused by inflation. However, many of these cost increases may not be recoverable.

### **FACTORS AND UNCERTAINTIES THAT MAY AFFECT FUTURE RESULTS**

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

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

Discussions containing these forward-looking statements may be found throughout this report including in the items entitled "Business" (Item 1), "Risk Factors" (Item 1A), and "Management's Discussion and Analysis of Financial Condition and Results of Operations" (Item 7), as well as any amendments thereto reflected in subsequent filings with the SEC. These statements are based on current management expectations and are subject

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to substantial risks and uncertainties which could cause actual results to differ materially from the results expressed in, or implied by, these forward-looking statements. When used herein or in such statements, the words “anticipate”, “believe”, “estimate”, “expect”, “may”, “will”, “should” or the negative thereof and similar expressions as they relate to Entegris or its management are intended to identify such forward-looking statements. We undertake no obligation to publicly release any revisions to the forward-looking statements or reflect events or circumstances after the date of this Annual Report on Form 10-K except as required by law.

### **Item 7a. Quantitative and Qualitative Disclosures about Market Risk**

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

### **Item 8. Financial Statements and Supplementary Data.**

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

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

This item is not applicable.

### **Item 9A. Controls and Procedures.**

#### **(a) EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES**

The Company’s management, including the Chief Executive Officer and Chief Financial Officer, has conducted an evaluation of the effectiveness of the design and operation of the Company’s disclosure controls and procedures (as defined under Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934 (the “1934 Act”)) as of December 31, 2009. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of that evaluation date, the Company’s disclosure controls and procedures were effective to ensure that information required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is (i) recorded, processed, summarized and reported within the time periods specified in applicable rules and forms of the Securities and Exchange Commission, and (ii) accumulated and communicated to our management, including its Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

#### **(b) MANAGEMENT’S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

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

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Further, because of changes in conditions, the

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effectiveness of internal controls over financial reporting may vary over time. Our system contains control-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

Management conducted an evaluation of the effectiveness of the system of internal control over financial reporting based on the framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Based on this evaluation, management concluded that the Company’s system of internal control over financial reporting was effective as of December 31, 2009.

**(c) CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING**

There was no change in the Company’s internal control over financial reporting during the most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

**Item 9B. Other Information.**

None.



**PART III**

**Item 10. Directors, Executive Officers and Corporate Governance**

The information called for by this item with respect to registrant's directors, including information relating to the independence of certain directors, identification of the audit committee and the audit committee financial expert, and with respect to corporate governance is set forth under the caption "Election of Directors" and "Corporate Governance", respectively, in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 5, 2010, and to be filed with the Securities and Exchange Commission on or about April 2, 2010, which information is hereby incorporated herein by reference.

The information called for by this item with respect to registrant's compliance with Section 16(a) of the Securities Exchange Act of 1934, as amended, is set forth under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 5, 2010, and to be filed with the Securities and Exchange Commission on or about April 2, 2010, which information is hereby incorporated herein by reference.

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

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

**Item 11. Executive Compensation.**

The information called for by this item is set forth under the caption "COMPENSATION OF EXECUTIVE OFFICERS", "MANAGEMENT DEVELOPMENT & COMPENSATION COMMITTEE" and "REPORT OF THE MANAGEMENT DEVELOPMENT & COMPENSATION COMMITTEE", respectively, in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 5, 2010, and to be filed with the Securities and Exchange Commission on or about April 2, 2010, which information is hereby incorporated herein by reference.

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

The information called for by this item is set forth under the caption "Proposal 3—Approval of Entegris, Inc. 2010 Stock Plan—Securities Authorized for Issuance Under Equity Compensation Plans" respectively, in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 5, 2010, and to be filed with the Securities and Exchange Commission on or about April 2, 2010, which information is hereby incorporated herein by reference.

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

The information called for by this item with respect to certain transactions and relationships between the registrant and directors, executive officers and five percent stockholders is set forth under the caption "MANAGEMENT AND ELECTION OF DIRECTORS-Nominees for Election as Directors" in the Company's definitive

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Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 5, 2010, and to be filed with the Securities and Exchange Commission on or about April 2, 2010, which information is hereby incorporated herein by reference.

**Item 14. Principal Accountant Fees and Services.**

The information called for by this item with respect to the fees paid to and the services performed by the registrant's principal accountant is set forth under the caption "PROPOSAL 2: RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR 2010" in the Company's definitive Proxy Statement for the Entegris, Inc. Annual Meeting of Stockholders to be held on May 5, 2010, and to be filed with the Securities and Exchange Commission on or about April 2, 2010, which information is hereby incorporated herein by reference.

**PART IV**

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

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

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

2. **Exhibits.**

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

<u>Reg. S-K Item 601(b) Reference</u>	<u>Document Incorporated</u>	<u>Referenced Document on file with the Commission</u>
(2)	Agreement and Plan of Merger, dated as of March 21, 2005, by and among Entegris, Inc., Mykrolis Corporation and Eagle DE, Inc.	Included as Annex A in the joint proxy statement/prospectus included in S-4 Registration Statement of Entegris, Inc. and Eagle DE, Inc. (No. 333-124719)
(2)	Agreement and Plan of Merger, dated as of March 21, 2005, by and between Entegris, Inc., and Eagle DE, Inc.	Included as Annex B in the joint proxy statement/prospectus included in S-4 Registration Statement of Entegris, Inc. and Eagle DE, Inc. (No. 333-124719)
(3)	Amended and Restated Certificate of Incorporation of Entegris, Inc.	Included as Annex C-2 in the joint proxy statement/prospectus included in S-4 Registration Statement of Entegris, Inc. and Eagle DE, Inc. (No. 333-124719)
(3)	By-Laws of Entegris, Inc., as amended December 17, 2008	Exhibit 3 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2008
(4)	Form of certificate representing shares of Common Stock, \$.01 par value per share	Exhibit 4.1 to Form S-4 Registration Statement of Entegris, Inc. and Eagle DE, Inc. (No. 333-124719)
(4)	Rights Agreement dated July 26, 2005, between Entegris and Wells Fargo Bank, N.A as rights agent	Exhibit 4.1 to Entegris, Inc. (Entegris Minnesota) Current Report on Form 8-K filed with the Securities and Exchange Commission on July 29, 2005
(10)	Entegris, Inc. Outside Directors' Stock Option Plan*	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)
(10)	Entegris, Inc. 2000 Employee Stock Purchase Plan	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)
(10)	2001 Equity Incentive Plan*	Exhibit 10.1 to Mykrolis Corporation Form S-1 Registration Statement (No. 333-57182)
(10)	Amendment No. 2 to 2001 Equity Incentive Plan*	Exhibit 10.2 to Entegris, Inc. Form 10-Q Quarterly Report for the period ended June 28, 2008
(10)	Amended and Restated Entegris Incentive Plan*	Exhibit 10.1 to Entegris, Inc. Form 10-Q Quarterly Report for the period ended June 28, 2008

\* A "management contract or compensatory plan"

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<u>Reg. S-K Item 601(b) Reference</u>	<u>Document Incorporated</u>	<u>Referenced Document on file with the Commission</u>
(10)	Lease Agreement, dated April 1, 2002 Between Nortel Networks HPOCS Inc. And Mykrolis Corporation, relating to Executive office, R&D and manufacturing facility located at 129 Concord Road Billerica, MA	Exhibit 10.1.3 to Mykrolis Corporation Quarterly Report on Form 10-Q, for the period ended March 31, 2002
(10)	Amended and Restated Employment Agreement, dated as of May 4, 2005, by and between Mykrolis Corporation and Gideon Argov*	Exhibit 10.13 to Mykrolis Corporation's Quarterly Report on Form 10-Q for the quarter ended April 2, 2005
(10)	STAT-PRO(R) 3000 and STAT-PRO(R) 3000E Purchase and Supply Agreement between Fluoroware, Inc. and Miller Waste Mills, d/b/a RTP Company, dated April 6, 1998	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)
(10)	PFA Purchase and Supply Agreement by and between E.I. Du Pont De Nemours and Company and Fluoroware, Inc., dated January 7, 1999, which was made effective retroactively to November 1, 1998, and supplemented by the Assignment and Limited Amendment by and between the same parties and Entegris, Inc., dated as of September 24, 1999	Entegris, Inc. Registration Statement on Form S-1 (No. 333-33668)
(10)	Amended and Restated Credit Agreement, dated as of March 2, 2009, among Entegris, Inc., the Banks (as defined therein) Wells Fargo Bank, NA, as Agent, Citibank, as Syndication Agent and RBS Citizens Bank, as Documentation Agent (the "Amended and Restated Credit Agreement").	Exhibit 99.1 to Entegris, Inc. Report on Form 8-K filed March 4, 2009.
(10)	Schedules and Exhibits to the Amended and Restated Credit Agreement.	Exhibit 99.2 to Entegris, Inc. Report on Form 8-K/A filed August 12, 2009.
(10)	Amendment No. 1 to the Amended and Restated Credit Agreement, dated July 17, 2009.	Exhibit 99.1 to Entegris, Inc. Report on Form 8-K filed July 23, 2009.
(10)	Amendment No. 2 to the Amended and Restated Credit Agreement, dated August 11, 2009.	Exhibit 99.1 to Entegris, Inc. Report on Form 8-K filed August 17, 2009.
(10)	Form of Indemnification Agreement between Entegris, Inc. and each of its executive officers and Directors	Exhibit 10.30 to Entegris, Inc. Annual Report on Form 10-K for the period ended August 27, 2005
(10)	Form of Executive Change of Control Termination Agreement between Entegris, Inc. and each of its executive officers*	Exhibit 10.31 to Entegris, Inc. Annual Report on Form 10-K for the period ended August 27, 2005
(10)	Entegris, Inc. 401 (k) Savings and Profit Sharing Plan (2005 Restatement)*	Exhibit 10.35 to Entegris, Inc. Annual Report on Form 10-K for the period ended August 27, 2005

\* A "management contract or compensatory plan"

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<u>Reg. S-K Item 601(b) Reference</u>	<u>Document Incorporated</u>	<u>Referenced Document on file with the Commission</u>
(10)	Form of Entegris, Inc. Restricted Stock Award Agreement*	Exhibit 10.2 to Entegris, Inc. Quarterly Report on Form 10-Q for the period ended November 27, 2005
(10)	Entegris, Inc. - Form of 2006 Equity Incentive Award Agreement	Exhibit 10.1 to Entegris, Inc. Quarterly Report on Form 10-Q for the period ended April 1, 2006,
(10)	Translation of Loan Agreement, dated November 2, 2007, between Nihon Entegris KK and Summitomo Mitsui Banking Corporation	Exhibit 10.1 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2007
(10)	Agreement and Plan of Merger and Amendment #1 thereto by and among Entegris, Inc. Entegris Acquisition Co. LLC, Poco Graphite, Inc. and Poco Graphite Holdings LLC, dated July 13, 2008	Exhibits 99.1 and 99.2 to Entegris, Inc. Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 11, 2008
(10)	Executive Termination Agreement, dated July 7, 2008 between Entegris, Inc. and Jean-Marc Pandraud*	Exhibit 10.2 to Entegris, Inc. Quarterly Report on Form 10-Q for the period ended September 27, 2008
(10)	Severance Agreement, dated July 7, 2008 between Entegris, Inc. and Gregory B. Graves*	Exhibit 10.3 to Entegris, Inc. Quarterly Report on Form 10-Q for the period ended September 27, 2008
(10)	Trust Agreement between Entegris, Inc. Fidelity Management Trust Company and Entegris Inc. 401(k) Savings and Profit Sharing Plan Trust, dated December 29, 2007.	Exhibit 10.3 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2007
(10)	Entegris, Inc. 2007 Deferred Compensation Plan*	Exhibit 10.2 to Entegris, Inc. Quarterly Report on Form 10-Q for the fiscal period ended June 30, 2007
(10)	Entegris, Inc.—Form of 2007 Equity Incentive Award Agreement*	Exhibit 10.4 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2007
(10)	Second Amended and Restated Membrane Manufacture and Supply Agreement, dated December 19, 2008, by and between Entegris, Inc. and Millipore Corporation	Exhibit 10.1 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2008.
(10)	Amended and Restated Supplemental Executive Retirement Plan for Key Salaried Employees*	Exhibit 10.2 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2008.
(10)	Entegris, Inc.—Form of 2008 Equity Incentive Award Agreement*	Exhibit 10.3 to Entegris, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2008.

\* A “management contract or compensatory plan”

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

<b>Reg. S-K Item 601(b) Reference</b>	<b>Exhibit No.</b>	<b>Documents Filed Herewith</b>
(10)	10.1	Entegris, Inc. 2009 RSU Unit Award Agreement*
(10)	10.2	Entegris, Inc. 2009 Stock Option Award Agreement*
(10)	10.3	First Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.4	Second Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.5	Third Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.6	Fourth Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.7	Fifth Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.8	Sixth Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.9	Seventh Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.10	Eighth Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.11	Ninth Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.12	Tenth Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.13	Eleventh Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.14	Twelfth Amendment to Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement)*
(10)	10.15	Amendment to Amended and Restated SERP*
(10)	10.16	Entegris, Inc. 2010 Stock Plan*
(10)	10.17	Third Amended and Restated Membrane Manufacture and Supply Agreement, dated October 13, 2009 by and between Entegris, Inc. and Millipore Corporation
(21)	21	Subsidiaries of Entegris, Inc.
(23)	23	Consent of Independent Registered Public Accounting Firm
(24)	24	Power of Attorney by the Directors of Entegris, Inc.
(31)	31.1	Certification required by Rule 13a-14(a) in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.

\* A "management contract or compensatory plan"

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<u>Reg. S-K Item 601(b) Reference</u>	<u>Exhibit No.</u>	<u>Documents Filed Herewith</u>
(31)	31.2	Certification required by Rule 13a-14(a) in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.
(32)	32.1	Certification required by Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
(32)	32.2	Certification required by Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

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\* A “management contract or compensatory plan”





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**ENTEGRIS, INC.**  
**INDEX TO FINANCIAL STATEMENTS**

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<a href="#">Consolidated Statements of Equity and Comprehensive (Loss) Income for the years ended December 31, 2009, December 31, 2008 and December 31, 2007</a>	F-5
<a href="#">Consolidated Statements of Cash Flows for the years ended December 31, 2009, December 31, 2008 and December 31, 2007</a>	F-7
<a href="#">Notes to Consolidated Financial Statements</a>	F-9

**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders  
Entegris, Inc.:

We have audited the accompanying consolidated balance sheets of Entegris, Inc. and subsidiaries as of December 31, 2009 and 2008, and the related consolidated statements of operations, equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended December 31, 2009. We also have audited Entegris, Inc.'s internal control over financial reporting as of December 31, 2009, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Entegris, Inc.'s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Item 9A.(b) *Management's Report on Internal Control Over Financial Reporting*. Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the consolidated financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Entegris, Inc. and subsidiaries as of December 31, 2009 and 2008, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2009, in conformity with U.S. generally accepted accounting principles. Also in our opinion, Entegris, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

/s/ KPMG LLP

Minneapolis, Minnesota  
February 25, 2010

**ENTEGRIS, INC. AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

<i>(In thousands, except share data)</i>	<u>December 31, 2009</u>	<u>December 31, 2008</u>
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 68,700	\$ 115,033
Trade accounts and notes receivable, net	91,122	70,535
Inventories	83,233	102,189
Deferred tax assets, deferred tax charges and refundable income taxes	11,085	14,661
Assets held for sale	5,998	2,450
Other current assets	7,320	8,260
<b>Total current assets</b>	<b>267,458</b>	<b>313,128</b>
Property, plant and equipment, net	135,431	159,738
<b>Other assets:</b>		
Investments	7,002	14,003
Other intangible assets, net	78,470	93,139
Deferred tax assets and other noncurrent tax assets	9,670	13,315
Other	6,641	4,501
<b>Total assets</b>	<b>\$ 504,672</b>	<b>\$ 597,824</b>
<b>LIABILITIES AND EQUITY</b>		
<b>Current liabilities:</b>		
Current maturities of long-term debt	\$ 11,257	\$ 13,166
Short-term borrowings	8,039	—
Accounts payable	23,553	21,782
Accrued liabilities	29,832	36,971
Deferred tax liabilities and income taxes payable	1,229	7,437
<b>Total current liabilities</b>	<b>73,910</b>	<b>79,356</b>
Long-term debt, less current maturities	52,492	150,516
Pension benefit obligations and other liabilities	22,055	24,559
Deferred tax liabilities and other noncurrent tax liabilities	6,558	7,223
Commitments and contingent liabilities	—	—
<b>Equity:</b>		
Preferred stock, par value \$.01; 5,000,000 shares authorized; none issued and outstanding as of December 31, 2009 and 2008	—	—
Common stock, par value \$.01; 400,000,000 shares authorized; issued and outstanding shares: 130,043,483 and 113,101,535	1,300	1,131
Additional paid-in capital	751,360	684,974
Retained deficit	(433,968)	(376,247)
Accumulated other comprehensive income	27,500	26,312
<b>Total Entegris, Inc. shareholders' equity</b>	<b>346,192</b>	<b>336,170</b>
Noncontrolling interest	3,465	—
<b>Total equity</b>	<b>349,657</b>	<b>336,170</b>
<b>Total liabilities and equity</b>	<b>\$ 504,672</b>	<b>\$ 597,824</b>

See the accompanying notes to consolidated financial statements.

**ENTEGRIS, INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

<i>(In thousands, except per share data)</i>	Year ended December 31, 2009	Year ended December 31, 2008	Year ended December 31, 2007
Net sales	\$ 398,644	\$ 554,699	\$ 626,238
Cost of sales	260,832	343,184	360,001
<b>Gross profit</b>	<b>137,812</b>	<b>211,515</b>	<b>266,237</b>
Selling, general and administrative expenses	117,001	147,531	163,918
Engineering, research and development expenses	35,039	40,086	39,727
Amortization of intangible assets	19,237	19,585	18,874
Impairment of goodwill	—	473,799	—
Restructuring charges	15,463	10,423	—
<b>Operating (loss) profit</b>	<b>(48,928)</b>	<b>(479,909)</b>	<b>43,718</b>
Interest expense (income), net	9,215	1,018	(5,245)
Other expense (income), net	1,745	15,486	(7,656)
<b>(Loss) income before income taxes and equity in net loss (earnings) of affiliates</b>	<b>(59,888)</b>	<b>(496,413)</b>	<b>56,619</b>
Income tax (benefit) expense	(2,996)	19,201	10,356
Equity in net loss (earnings) of affiliates	867	283	(93)
<b>(Loss) income from continuing operations</b>	<b>(57,759)</b>	<b>(515,897)</b>	<b>46,356</b>
Loss from operations of discontinued businesses, net of taxes	—	(1,105)	(891)
Impairment loss on assets of discontinued businesses, net of taxes	—	—	(1,106)
<b>Loss from discontinued operations, net of taxes</b>	<b>—</b>	<b>(1,105)</b>	<b>(1,997)</b>
<b>Net (loss) income</b>	<b>(57,759)</b>	<b>(517,002)</b>	<b>44,359</b>
Less net loss attributable to the noncontrolling interest	38	—	—
<b>Net loss attributable to Entegris, Inc.</b>	<b>\$ (57,721)</b>	<b>\$ (517,002)</b>	<b>\$ 44,359</b>
Amounts attributable to Entegris, Inc.			
(Loss) income from continuing operations, net of tax	\$ (57,721)	\$ (515,897)	\$ 46,356
Loss from discontinued operations, net of tax	—	(1,105)	(1,997)
<b>Net (loss) income attributable to Entegris, Inc.</b>	<b>\$ (57,721)</b>	<b>\$ (517,002)</b>	<b>\$ 44,359</b>
Basic (loss) earnings attributable to Entegris, Inc. per common share:			
Continuing operations	\$ (0.49)	\$ (4.58)	\$ 0.37
Discontinued operations	—	(0.01)	(0.02)
<b>Net (loss) income</b>	<b>\$ (0.49)</b>	<b>\$ (4.59)</b>	<b>\$ 0.36</b>
Diluted (loss) earnings attributable to Entegris, Inc. per common share:			
Continuing operations	\$ (0.49)	\$ (4.58)	\$ 0.37
Discontinued operations	—	(0.01)	(0.02)
<b>Net (loss) income</b>	<b>\$ (0.49)</b>	<b>\$ (4.59)</b>	<b>\$ 0.35</b>
Weighted shares outstanding			
Basic	117,321	112,653	124,339
Diluted	117,321	112,653	126,258

See the accompanying notes to consolidated financial statements.

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

<i>(In thousands)</i>	Common shares outstanding	Common stock	Additional paid-in capital	Prepaid Forward contract for Share Repurchase	Retained earnings	Accumulated other comprehensive income (loss)	Noncontrolling interest	Total	Comprehensive income (loss)
<b>Balance at December 31, 2006</b>	132,771	\$ 1,328	\$ 793,058	\$ (5,000)	\$ 228,936	\$ (2,342)	\$ —	\$1,015,980	
Adjustment upon adoption of change in accounting for income taxes	—	—	—	—	1,110	—	—	1,110	
Adjusted beginning balance	132,771	\$ 1,328	\$ 793,058	\$ (5,000)	\$ 230,046	\$ (2,342)	\$ —	1,017,090	
Shares issued under employee stock plans	4,573	46	29,810	—	—	—	—	29,856	
Share-based compensation expense	—	—	10,344	—	—	—	—	10,344	
Repurchase and retirement of common stock	(21,988)	(220)	(131,946)	5,000	(128,943)	—	—	(256,109)	
Tax benefit associated with stock plans	—	—	244	—	—	—	—	244	
Foreign currency translation	—	—	—	—	—	7,383	—	7,383	7,383
Net change in unrealized gain on marketable securities, net of tax	—	—	—	—	—	(135)	—	(135)	(135)
Minimum pension liability adjustment	—	—	—	—	—	(723)	—	(723)	(723)
Net income	—	—	—	—	44,359	—	—	44,359	44,359
Total comprehensive income									\$ 50,884
<b>Balance at December 31, 2007</b>	115,356	\$ 1,154	\$ 701,510	\$ —	\$ 145,462	\$ 4,183	\$ —	\$ 852,309	
Shares issued under employee stock plans	1,717	17	3,080	—	—	—	—	3,097	
Share-based compensation expense	—	—	7,024	—	—	—	—	7,024	
Repurchase and retirement of common stock	(3,971)	(40)	(24,148)	—	(4,707)	—	—	(28,895)	
Tax shortfall associated with stock plans	—	—	(2,492)	—	—	—	—	(2,492)	
Foreign currency translation	—	—	—	—	—	23,139	—	23,139	23,139
Minimum pension liability adjustment	—	—	—	—	—	(1,010)	—	(1,010)	(1,010)
Net loss	—	—	—	—	(517,002)	—	—	(517,002)	(517,002)
Total comprehensive loss									\$ (494,873)
<b>Balance at December 31, 2008</b>	113,102	\$ 1,131	\$ 684,974	\$ —	\$(376,247)	\$ 26,312	\$ —	\$ 336,170	
Shares issued under stock plans	841	8	1,272	—	—	—	—	1,280	
Shares issued under stock offering	16,100	161	56,477	—	—	—	—	56,638	
Share-based compensation expense	—	—	8,102	—	—	—	—	8,102	
Tax benefit associated with stock plans	—	—	535	—	—	—	—	535	
Recognition of noncontrolling interest upon acquisition of business	—	—	—	—	—	—	3,246	3,246	
Reclassification of foreign currency translation associated with acquisition of business	—	—	—	—	—	756	—	756	756
Foreign currency translation	—	—	—	—	—	784	257	1,041	1,041
Minimum pension liability adjustment	—	—	—	—	—	(352)	—	(352)	(352)
Net loss	—	—	—	—	(57,721)	—	(38)	(57,759)	(57,759)
Total comprehensive loss									\$ (56,314)
<b>Balance at December 31, 2009</b>	130,043	\$ 1,300	\$ 751,360	\$ —	\$(433,968)	\$ 27,500	\$ 3,465	\$ 349,657	

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

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

<i>(In thousands)</i>	<b>Foreign currency translation</b>	<b>Net unrealized gain (loss) on marketable securities</b>	<b>Minimum pension liability adjustment</b>	<b>Total accumulated other comprehensive income (loss)</b>
<b>Balance at December 31, 2006</b>	\$ (2,249)	\$ 135	\$ (228)	\$ (2,342)
Foreign currency translation	7,383	—	—	7,383
Change in unrealized gain on marketable securities, net of tax of \$83	—	(135)	—	(135)
Minimum pension liability adjustment, net of tax of \$522	—	—	(723)	(723)
<b>Balance at December 31, 2007</b>	<u>\$ 5,134</u>	<u>\$ —</u>	<u>\$ (951)</u>	<u>\$ 4,183</u>
Foreign currency translation	23,139	—	—	23,139
Minimum pension liability adjustment, net of tax of \$648	—	—	(1,010)	(1,010)
<b>Balance at December 31, 2008</b>	<u>\$ 28,273</u>	<u>\$ —</u>	<u>\$ (1,961)</u>	<u>\$ 26,312</u>
Foreign currency translation	784	—	—	784
Minimum pension liability adjustment, net of tax of \$183	—	—	(352)	(352)
Reclassification of foreign currency translation associated with acquisition of business	756	—	—	756
<b>Balance at December 31, 2009</b>	<u>\$ 29,813</u>	<u>\$ —</u>	<u>\$ (2,313)</u>	<u>\$ 27,500</u>

See the accompanying notes to consolidated financial statements

**ENTEGRIS, INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

<i>(In thousands)</i>	Year ended December 31, 2009	Year ended December 31, 2008	Year ended December 31, 2007
<b>Operating activities:</b>			
Net (loss) income	\$ (57,759)	\$ (517,002)	\$ 44,359
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Loss (income) from discontinued operations	—	1,105	1,997
Depreciation	30,890	26,758	24,902
Amortization	19,237	19,585	18,874
Stock-based compensation expense	8,102	7,024	10,344
Impairment of property and equipment	1,184	1,388	4,098
Impairment of goodwill	—	473,799	—
Impairment of intangibles	—	—	235
Impairment of equity investments	1,000	11,698	—
Provision for doubtful accounts	313	697	(227)
Deferred tax valuation allowance	16,579	42,093	—
Provision for deferred income taxes	(18,258)	(26,443)	(20,434)
Charge for fair value mark-up of acquired inventory sold	4,553	13,519	836
Provision for excess and obsolete inventory	4,871	4,899	7,130
Excess tax benefit from employee stock plans	—	—	(244)
Equity in net loss (earnings) of affiliates	867	283	(93)
Gain on sale of property and equipment	30	(63)	(274)
Gain on sale of equity investments	—	—	(6,068)
Amortization of debt issuance costs	2,086	—	—
Loss recognized as a result of remeasuring to fair value the equity interest in the acquiree held by the Company before the business combination	(205)	—	—
Net loss attributable to noncontrolling interest	38	—	—
Changes in operating assets and liabilities, excluding effects of acquisitions:			
Trade accounts receivable and notes receivable	(19,203)	53,355	20,054
Inventories	10,679	(2,977)	16,931
Accounts payable and accrued liabilities	(1,579)	(35,523)	(2,935)
Other current assets	1,662	1,195	(1,695)
Income taxes payable and refundable income taxes	481	(18,873)	14,682
Other	(1,375)	9,743	(455)
<b>Net cash provided by operating activities</b>	<b>4,193</b>	<b>66,260</b>	<b>132,017</b>
<b>Investing activities:</b>			
Acquisition of property and equipment	(13,162)	(26,987)	(26,919)
Acquisition of businesses, net of cash acquired	493	(162,852)	(44,911)
Proceeds from sales of property and equipment	512	900	2,021
Proceeds from sale of assets held for sale	2,314	—	—
Proceeds from sale of equity investments	—	—	6,568
Purchase of equity investments	—	(10,982)	(6,126)
Purchases of short-term investments	—	—	(269,822)
Proceeds from sale or maturities of short-term investments	—	—	390,915
Other	—	—	(926)
<b>Net cash (used in) provided by investing activities</b>	<b>(9,843)</b>	<b>(199,921)</b>	<b>50,800</b>
<b>Financing activities:</b>			
Principal payments on short-term borrowings and long-term debt	(799,645)	(64,707)	(88,115)
Proceeds from short-term borrowings and long-term debt	704,675	173,811	131,063
Proceeds from stock offering, net of offering costs	56,638	—	—
Repurchase and retirement of common stock	—	(28,895)	(256,109)
Excess tax benefit from employee stock plans	—	—	244
Payment for debt issuance costs	(3,638)	(625)	—
Issuance of common stock	1,280	3,097	29,856
<b>Net cash provided by (used in) financing activities</b>	<b>(40,690)</b>	<b>82,681</b>	<b>(183,061)</b>
<b>Discontinued operations:</b>			
Net cash (used in) provided by operating activities	—	(1,878)	1,237
Net cash provided by investing activities	—	735	—
<b>Net cash (used in) provided by discontinued operations</b>	<b>—</b>	<b>(1,143)</b>	<b>1,237</b>
Effect of exchange rate changes on cash and cash equivalents	7	6,501	4,856
<b>(Decrease) increase in cash and cash equivalents</b>	<b>(46,333)</b>	<b>(45,622)</b>	<b>5,849</b>
Cash and cash equivalents at beginning of period	115,033	160,655	154,806
<b>Cash and cash equivalents at end of period</b>	<b>\$ 68,700</b>	<b>\$ 115,033</b>	<b>\$ 160,655</b>

**Supplemental Cash Flow Information**

<i>(In thousands)</i>	Year ended December 31, 2009	Year ended December 31, 2008	Year ended December 31, 2007
Non-cash transactions:			
Equipment purchases in accounts payable	\$ 405	\$ 4,737	\$ 1,198
Acquisition of a business through the use of a seller's note	\$ 3,221	—	—
Schedule of interest and income taxes paid:			
Interest paid	\$ 7,492	\$ 4,719	\$ 691
Income taxes, net of refunds received	\$ (2,794)	\$ 23,300	\$ 3,794

See accompanying notes to consolidated financial statements.



ENTEGRIS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Nature of Operations and Principles of Consolidation** Entegris is a leading provider of products and services that purify, protect and transport the critical materials used in key technology-driven industries, primarily the semiconductor and related industries.

The consolidated financial statements include the accounts of the Company and its majority-owned subsidiaries. Intercompany profits, transactions and balances have been eliminated in consolidation.

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

**Concentrations of Suppliers** Certain materials included in the Company's products are obtained from a single source or a limited group of suppliers. Although the Company seeks to reduce dependence on those sole and limited source suppliers, the partial or complete loss of these sources could have at least a temporary adverse effect on the Company's results of operations. Furthermore, a significant increase in the price of one or more of these components could adversely affect the Company's results of operations.

**Share-based Compensation** The Company measures the cost of employee services received in exchange for the award of equity instruments based on the fair value of the award at the date of grant. The cost is recognized over the period during which an employee is required to provide services in exchange for the award.

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

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

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

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

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

**Fair Value of Financial Instruments** The carrying value of cash equivalents, accounts receivable, accounts payable and short-term debt approximates fair value due to the short maturity of those instruments. The carrying value of long-term debt approximates fair value due to the short maturity and variable interest rates of virtually all of those instruments.

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

**Derivative Financial Instruments** The Company records derivatives as assets or liabilities on the balance sheet and measures such instruments at fair value. Changes in fair value of derivatives are recorded each period in current results of operations or other comprehensive income, depending on whether the derivative is designated as part of a hedge transaction.

The Company periodically enters into forward foreign currency contracts to reduce exposures relating to rate changes in certain foreign currencies. Certain exposures to credit losses related to counterparty nonperformance exist. However, the Company does not anticipate nonperformance by the counterparties since they are large, well-established financial institutions. Except as described in the following paragraph, none of these derivatives is accounted for as a hedge transaction. Accordingly, changes in the fair value of forward foreign currency contracts are recorded as a component of net income. The fair values of the Company's derivative financial instruments are based on prices quoted by financial institutions for these instruments. The Company was a party to forward foreign currency contracts with notional amounts of \$0 and \$1.8 million at December 31, 2009 and 2008, respectively.

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

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

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**Revenue Recognition/Concentration of Risk** Revenue and the related cost of sales are generally recognized upon shipment of the products. Revenue for product sales is recognized upon delivery, when persuasive evidence of an arrangement exists, when title and risk of loss have been transferred to the customer, collectability is reasonably assured, and pricing is fixed or determinable. Shipping and handling fees related to sales transactions are billed to customers and are recorded as sales revenue. Shipping and handling costs incurred are recorded in cost of sales.

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

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

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

The Company has significant amounts of deferred tax assets. Management reviews its deferred tax assets for recoverability on a quarterly basis and assesses the need for valuation allowances. These deferred tax assets are evaluated jurisdictionally, by considering historical levels of income, future reversal of existing taxable temporary differences, taxable income in carryback years where permitted, estimates of future taxable income streams and the impact of tax planning strategies. A valuation allowance is recorded to reduce deferred tax assets when it is determined that it is more likely than not that the Company would not be able to realize all or part of its deferred tax assets based on all available evidence.

Except as indicated in Note 16 to the consolidated financial statements as relates to 2.0 billion yen (approximately \$22 million), the Company intends to continue to reinvest its remaining undistributed international earnings in its international operations indefinitely; therefore, no U.S. tax expense has been recorded to cover the repatriation of such undistributed earnings.

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

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

## Recent Accounting Pronouncements

### *Accounting Standards Codification™*

In June 2009, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2009-01, *Generally Accepted Accounting Principles* (ASC Topic 105) which establishes the FASB Accounting Standards Codification (the Codification or ASC) as the official single source of authoritative U.S. generally accepted accounting principles (GAAP). All existing accounting standards are superseded. All other accounting guidance not included in the Codification will be considered non-authoritative. The Codification also includes all relevant Securities and Exchange Commission (SEC) guidance organized using the same topical structure in separate sections within the Codification.

Following the Codification, the Board will not issue new standards in the form of Statements, FASB Staff Positions or Emerging Issues Task Force Abstracts. Instead, it will issue Accounting Standards Updates (ASU) which will serve to update the Codification, provide background information about the guidance and provide the basis for conclusions on the changes to the Codification.

The Codification is not intended to change GAAP, but it will change the way GAAP is organized and presented. The Codification is effective for the Company's condensed consolidated financial statements as of and for the period ended September 26, 2009 and the principal impact on the financial statements is limited to disclosures as all future references to authoritative accounting literature will be referenced in accordance with the Codification. In order to ease the transition to the Codification, the Company is providing the Codification cross-reference alongside the references to the standards issued and adopted prior to the adoption of the Codification.

In December 2007, the FASB issued SFAS No. 141 (revised 2007) *Business Combinations* (ASC Topic 805). This guidance retains the fundamental requirements of the original pronouncement requiring that the purchase method be used for all business combinations and defines the acquirer as the entity that obtains control of one or more businesses in the business combination, establishes the acquisition date as the date that the acquirer achieves control and requires the acquirer to recognize the assets acquired, liabilities assumed and any noncontrolling interest at their fair values as of the acquisition date. The guidance also requires that acquisition-related costs be recognized separately from the acquisition. This guidance was effective for the Company in the first quarter of 2009 and was followed by the Company in its accounting for the acquisition described in Note 3 to consolidated financial statements.

In December 2007, the FASB issued Statement No. 160, *Noncontrolling Interests in Consolidated Financial Statements* (ASC Topic 810). This guidance clarifies that a noncontrolling interest in a subsidiary should be reported as equity in the consolidated financial statements. Consolidated net income should include the net income for both the parent and the noncontrolling interest with disclosure of both amounts on the consolidated statement of operations. The calculation of earnings per share will continue to be based on income amounts attributable to the parent. This guidance was effective for the Company in the first quarter of 2009 and was followed by the Company in its accounting for the acquisition described in Note 3 to consolidated financial statements.

In May 2009, the FASB issued SFAS No. 165, *Subsequent Events* (ASC Topic 855). This guidance establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. This guidance was effective for the Company in the second quarter of 2009 and its adoption did not have a material impact on the Company's consolidated financial statements.

In June 2009, the FASB issued SFAS No. 167, *Amendments to FASB Interpretation No 46(R)* (ASC Topic 810). This guidance amends 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 is effective for the Company in 2010. The Company does not expect its adoption to have a material effect on the Company's consolidated financial statements.

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In October 2009, the FASB issued the following ASU No. 2009-13, *Revenue Recognition (ASC Topic 605)—Multiple-Deliverable Revenue Arrangements, a consensus of the FASB Emerging Issues Task Force*. This guidance modifies 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 Company is currently evaluating the impact of adopting this update on its consolidated financial statements.

### **(2) IMPAIRMENT REVIEW OF GOODWILL AND LONG-LIVED ASSETS**

In accordance accounting principles generally accepted in the United States, the Company tested for impairment its goodwill in connection with its annual impairment test of goodwill as of August 31, 2008, and due to events and changes in circumstances through the end of the third and fourth quarters of the year ended December 31, 2008, the Company had additional triggering events that indicated impairments had occurred. In addition, the Company tested its long-lived assets (principally property, plant and equipment and intangibles) for possible impairment.

The factors deemed by management to have collectively constituted impairment triggering events included a significant decrease in the Company’s market capitalization as of its annual impairment date, December 31, 2008 and March 28, 2009, which was significantly below the recorded value of its consolidated net assets, and a significant decline in the current and forecasted business levels. As a result of the impairment assessments, the Company recorded goodwill impairment charges of \$379.8 million and \$94.0 million in the third and fourth quarters, respectively, of the year ended December 31, 2008. 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.

#### **Goodwill**

The Company assesses goodwill for impairment annually as of August 31, and when an event occurs or circumstances change that would indicate that the asset might be impaired. Goodwill is tested for impairment using a two-step process. In the first step, the fair value of each reporting unit is compared to its carrying value. For purposes of assessing impairment, the Company was a single reporting unit through December 31, 2008. If the fair value of the reporting unit exceeds the carrying value of its net assets, goodwill is considered not impaired, and no further testing is required. If the carrying value of the net assets exceeds the fair value of a reporting unit, a second step of the impairment assessment is performed in order to determine the implied fair value of a reporting unit’s goodwill. Determining the implied fair value of goodwill requires a valuation of the reporting unit’s tangible and intangible assets and liabilities in a manner similar to the allocation of purchase price in a business combination. If the carrying value of the reporting unit’s goodwill exceeds the implied fair value of its goodwill, goodwill is deemed impaired and is written down to the extent of the difference.

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

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

### **Long-Lived Assets**

In accordance with U.S. generally accepted accounting principles, the Company reviews its long-lived assets whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. If the carrying amount of an asset or group of assets exceeds its fair value, the asset will be written down to its fair value. In connection with the triggering events discussed above, during the third and fourth quarters of fiscal year 2008 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. As required under U.S. generally accepted accounting principles, the impairment analysis of the Company's long-lived assets occurred before the goodwill impairment assessment during the third and fourth quarters of fiscal year 2008.

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), Microenvironments (ME), Poco Graphite (POCO) and Entegris Specialty Coatings (ESC).

The Company's estimate of undiscounted cash flows attributable to the asset groups included only future cash flows (cash inflows less associated cash outflows) that are directly associated with and that are expected to arise as a direct result of the use and eventual disposition of the asset group. Estimates of future cash flows used to test the recoverability of a long-lived asset (asset group) incorporated the Company's assumptions about its use of the asset group and were determined for the remaining useful life of the primary asset (the principal long-lived tangible asset being depreciated or intangible asset being amortized that is the most significant component asset from which the asset group derives its cash-flow-generating capacity) of each asset group. The key assumptions were projected revenues, gross margin expectations and operating cost estimates. Future cash flows used to test the recoverability of each asset group were made for the remaining useful life of the asset group, which itself is based on the remaining useful life of the primary asset of each group as described below. Where the primary asset is not the asset of the asset group with the longest remaining useful life, estimates of future cash flows for the group assume the sale of the group at the end of the remaining useful life of the primary asset.

The recoverability test included all cash outflows that the asset group is estimated to incur to obtain the estimated future cash inflows. Accordingly, where required, the Company reflected within the cash flows of its asset groups an allocation of corporate expenses to its asset groups, because those assets require the services provided by the Company's shared services infrastructure (among others, finance, human resources, information technology, sales and marketing, legal) if the asset group were operated on a stand-alone basis.

Under the first quarter 2009 impairment test, all asset groups had future undiscounted cash flows in excess of their carrying values by at least 60%, except for the ME asset group, which the Company estimated had future undiscounted cash flows 27% higher than its carrying value. The carrying values of this asset group's property, plant and equipment and intangible assets at March 28, 2009 were \$42.9 million and \$1.2 million, respectively. If either revenue for the Company's asset groups decreased from the then-current forecast without offsetting decreases in costs, or if the asset group's operating costs increased from the then-current forecast without offsetting increases in revenue, the estimated undiscounted cash flows of the asset groups could have been less than their carrying values. This would have required an impairment loss to be recognized based on the excess of the carrying amount of the respective asset group over its fair value. As noted, fair value would be determined by discounting estimated future cash flows, appraisals or other methods deemed appropriate. Actual results of the ME asset group for the nine-month period ended December 31, 2009 were better than forecast at the end of the first quarter.

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

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

Based on slightly improved economic conditions within the semiconductor industry and the absence of any other triggering events, the Company was not required to perform impairment testing for any of its asset groups for the second, third and fourth quarters of 2009. Due to the uncertain economic environment within the semiconductor industry, the Company will continue to monitor circumstances and events to determine whether additional asset impairment testing is warranted. It is possible that in the future the Company may no longer be able to conclude that there is no impairment of its long-lived assets, nor can the Company provide assurance that material impairment charges of long-lived assets will not occur in future periods.

### **(3) ACQUISITIONS AND DIVESTITURES**

#### **Acquisition of Pureline Co., Ltd.**

In 2007, the Company acquired a 40% ownership interest in Pureline Co., Ltd. (Pureline), a privately held company located in Munmak, South Korea and manufacturer of fluid handling products. The Company accounted for its interest in Pureline under the equity method of accounting. Concurrent with its 2007 investment in Pureline, the Company obtained an option to purchase one-half of the remaining outstanding shares of Pureline through July 31, 2009 and the remaining outstanding shares thereafter by July 31, 2010. The exercise price of such options to purchase the additional equity interest in Pureline was set at a multiple of Pureline's calendar 2008 and 2009 adjusted earnings.

On July 31, 2009, the Company exercised its option and acquired an additional 30% equity interest in Pureline. The exercise price of the option to purchase the additional 30% equity interest was \$4.3 million. The Company paid \$1.1 million in cash and executed a note to the seller for \$3.2 million, payable in three installments through April 2010. The addition of Pureline augments the Company's base of business in the semiconductor industry, particularly in the growing South Korean market.

As of the date of the acquisition, the Company owned a 70% controlling interest in Pureline. Accordingly, the transaction was accounted for under the acquisition method of accounting and the results of operations of Pureline are included in the Company's consolidated financial statements as of and since July 31, 2009.

Pureline's sales and operating results for five months ended December 31, 2009 were not material to the Company's consolidated financial statements. Pro forma results are not included since this acquisition does not constitute a material business combination.

The Company remeasured its previously held equity interest in Pureline at its July 31, 2009 fair value. The July 31, 2009 fair value of the equity interest in Pureline held by the Company before the acquisition date was \$4.3 million. Based on the carrying value of the Company's equity interest in Pureline before the business combination, the Company recognized a loss of \$0.2 million in earnings. In prior reporting periods, the Company recognized changes in the value of its equity interest in Pureline related to translation adjustments in other comprehensive loss. Accordingly, the \$0.8 million recognized previously in other comprehensive loss was reclassified and included in the calculation of the charge to earnings.

In connection with the transaction, the Company measured and recorded the fair value of the 30% noncontrolling interest in Pureline. The fair value of the noncontrolling interest in Pureline at July 31, 2009 was \$3.2 million.

The purchase price has been allocated based on the fair values of all of Pureline's assets acquired and liabilities assumed, with the noncontrolling interest associated with the 30% minority interest recognized in the Company's consolidated balance sheet. The final valuation of net assets is expected to be completed as soon as possible, but no later than one year from the acquisition date. The review of tax assets and liabilities is still being finalized.

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The following table summarizes the allocation of the purchase price to the fair values of the assets at the date of acquisition:

<i>(In thousands):</i>	
Accounts receivable, inventory and other assets	\$ 5,166
Property, plant and equipment	5,120
Identifiable intangible assets	4,210
Total assets acquired	<u>14,496</u>
Current liabilities	(585)
Long-term liabilities	(80)
Deferred tax liabilities	(1,544)
Total liabilities assumed	<u>(2,209)</u>
Net assets acquired	<u>\$12,287</u>

The identifiable intangible assets included tradenames and trademarks, patents and customer relationships with estimated useful lives ranging from 9 to 15 years. The fair value of identifiable intangible assets was determined using various valuation techniques that the Company believes that market participants would use. These methods used a forecast of expected future net cash flows and do not anticipate any revenue or cost synergies. These cash flows are then adjusted to present value by applying an appropriate discount rate that reflects the risk factors associated with the cash flow streams, some of which are more certain than others.

The valuation of the Company's previously held equity interest, the 30% noncontrolling interest in Pureline and the identifiable intangible assets were based on the information that was available as of the acquisition date and the expectations and assumptions that have been deemed reasonable by the Company's management.

In performing these valuations, the Company used discounted cash flows and other factors as the best evidence of fair value. The key underlying assumptions of the discounted cash flows were projected revenues, gross margin expectations and operating cost estimates. There are inherent uncertainties and management judgment required in these determinations. No assurance can be given that the underlying assumptions will occur as projected.

The net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed exceeded the sum of the exercise price of the option to purchase the additional 30% equity interest (\$4.3 million), the fair value of the equity interest in Pureline held by the Company before the acquisition date (\$4.3 million) and the fair value of the noncontrolling interest in Pureline at July 31, 2009 (\$3.2 million) by \$0.4 million. Accordingly, the Company recognized a bargain purchase gain, classified as "Other income" in the Company's consolidated statements of operations, of \$0.4 million in 2009.

### Acquisition of Poco Graphite, Inc.

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

The Company paid cash consideration of \$162.9 million for POCO, including transaction costs of \$1.3 million. The transaction is subject to extensive escrow fund arrangements, portions of which remain in place to various dates through August 2013, totaling \$24.0 million to secure certain environmental and export compliance obligations of the POCO sellers. This acquisition was accounted for under the purchase method of accounting.



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The Company's consolidated financial statements for the year ended December 31, 2008 include the net assets and results of operations of POCO from August 11, 2008, the date of acquisition. Pro forma results are not presented since this acquisition did not constitute a material business combination.

The purchase price for POCO was allocated based on the fair values of assets acquired and liabilities assumed. The following table presents the allocation of purchase price.

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

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

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

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

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

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

<i>(In thousands)</i>	
Finished goods	\$ 5,847
Work in process	11,142
Total	<u>\$ 16,989</u>

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- (b) The fair value of acquired property, plant and equipment was valued at its value-in-use.
- (c) The fair value of acquired identifiable intangible assets, which were valued as described below, was as follows:

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

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

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

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

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

- (d) Gives the effect of the estimated tax effects of the acquisition.
- (e) The goodwill recorded in connection with the acquisition was not amortized and was not deductible for tax purposes. The goodwill was analyzed for impairment and written off in 2008. See Note 2 to the consolidated financial statements.

### Acquisition of Specialty Coatings business

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

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

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

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

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

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

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

### Divestitures and Discontinued Operations

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

The consolidated financial statements have been reclassified to segregate as discontinued operations the assets and liabilities, and operating results of, the product lines divested for all periods presented. The summary of operating results from discontinued operations for the years ended December 31, 2009, 2008 and 2007 is as follows:

<u>(In thousands)</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Net sales	\$—	\$ 4,460	\$ 4,891
Loss from discontinued operations, before income taxes	—	\$(1,040)	\$(3,996)
Income tax (expense) benefit	—	(65)	1,999
(Loss) income from discontinued operations, net of taxes	\$—	\$(1,105)	\$(1,997)

No interest expense was allocated to the operating results of discontinued operations.

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### (4) ACCOUNTS RECEIVABLE

Accounts receivable and notes receivable from customers at December 31, 2009 and 2008 consist of the following:

<i>(In thousands)</i>	2009	2008
Accounts receivable	\$ 82,938	\$ 59,326
Notes receivable	9,878	12,521
	92,816	71,847
Less allowance for doubtful accounts	1,694	1,312
	<u>\$ 91,122</u>	<u>\$ 70,535</u>

### (5) INVENTORIES

Inventories at December 31, 2009 and 2008 consist of the following:

<i>(In thousands)</i>	2009	2008
Raw materials	\$ 21,016	\$ 24,922
Work-in-process	11,136	16,498
Finished goods <sup>(a)</sup>	50,453	59,954
Supplies	628	815
	<u>\$ 83,233</u>	<u>\$ 102,189</u>

(a) Includes consignment inventories held by customers for \$4,121 and \$4,465 at December 31, 2009 and 2008 respectively.

### (6) PROPERTY, PLANT AND EQUIPMENT

Property, plant, and equipment at December 31, 2009 and 2008 consist of the following:

<i>(In thousands)</i>	2009	2008	Estimated useful lives in years
Land	\$ 10,729	\$ 12,560	
Buildings and improvements	70,124	78,960	5-35
Manufacturing equipment	132,309	138,527	5-10
Molds	62,786	82,140	3-5
Office furniture and equipment	55,088	56,078	3-8
	331,036	368,265	
Less accumulated depreciation	195,605	208,527	
	<u>\$ 135,431</u>	<u>\$ 159,738</u>	

Depreciation expense for the years ended December 31, 2009, 2008, and 2007, was \$30.9 million, \$26.8 million, and \$24.9 million, respectively. The Company recorded asset impairment write-offs on molds and equipment due to abandonment of approximately \$1.2 million, \$1.4 million, and \$4.1 million for the fiscal years ended December 31, 2009, 2008 and 2007, respectively. All impairment losses are included in cost of sales.

### (7) INVESTMENTS

At December 31, 2009 and 2008, the Company held equity investments totaling \$7.0 million and \$14.0 million, respectively. These investments all represent interests in privately held companies. Investments representing \$5.3 million of the total at December 31, 2009 are accounted for under the equity method of accounting, with the remaining \$1.7 million accounted for under the cost method.

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During 2009, the Company exercised its option and acquired an additional 30% equity interest in Pureline Co., Ltd. (Pureline), bringing its total ownership percentage in Pureline to 70%. Accordingly, the transaction was accounted for under the acquisition method of accounting and the results of operations of Pureline are included in the Company's consolidated financial statements since July 31, 2009. (See Note 3 to the Company's consolidated financial statements). Also in 2009, the Company determined that one of its investments was totally impaired and recorded an impairment loss of \$1.0 million that was classified as other expense.

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

**(8) GOODWILL AND INTANGIBLE ASSETS**

As of December 31, 2009 and 2008, the Company recognized no goodwill on its consolidated balance sheet. The reduction from \$402.1 million balance reflected at December 31, 2007 mainly reflects the \$473.8 million impairment charge recorded during the year (See Note 2 for further discussion). The impairment charge and other changes to goodwill are reflected in the table below.

The changes in the carrying amount of goodwill for the year ended 2008 are as follows:

<i>(In thousands)</i>	<b>2008</b>
Beginning of period	\$ 402,125
Acquisition of POCO Graphite, Inc.	65,893
Adjustments to Mykrolis purchase price allocation	(822)
Adjustments to specialty coatings acquisition purchase price allocation	59
Other, including foreign currency translation	6,544
Impairment charge	(473,799)
End of year	<u>\$ —</u>

Other intangible assets, excluding goodwill, at December 31, 2009 and 2008 consist of the following:

<i>(In thousands)</i>	<b>2009</b>			<b>Weighted average life in years</b>
	<b>Gross carrying amount</b>	<b>Accumulated amortization</b>	<b>Net carrying value</b>	
Patents	\$ 19,020	\$ 16,839	\$ 2,181	9.1
Developed technology	74,988	47,541	27,447	7.5
Trademarks and trade names	17,245	7,950	9,295	9.6
Customer relationships	56,862	17,839	39,023	11.1
Employment and noncompete agreements	1,707	1,607	100	4.1
Other	4,278	3,854	424	5.5
	<u>\$ 174,100</u>	<u>\$ 95,630</u>	<u>\$ 78,470</u>	9.0

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

Amortization expense was \$19.2 million, \$19.6 million, \$18.9 million in the fiscal years ended December 31, 2009, 2008 and 2007, respectively.

Estimated amortization expense for the fiscal years 2010 to 2014, and thereafter, is \$13.3 million, \$10.1 million, \$9.4 million, \$8.8 million, \$7.7 million, and \$29.2 million, respectively.

**(9) ACCRUED LIABILITIES**

Accrued liabilities at December 31, 2009 and 2008 consist of the following:

<i>(In thousands)</i>	2009	2008
Payroll and related benefits	\$ 14,045	\$ 19,601
Employee benefits	2,115	1,868
Taxes, other than income taxes	2,525	823
Interest	204	50
Warranty and related	877	1,112
Other	10,066	13,517
	<u>\$ 29,832</u>	<u>\$ 36,971</u>

**(10) WARRANTY**

The Company accrues for warranty costs based on historical trends and the expected material and labor costs to provide warranty services. The majority of products sold are generally covered by a warranty for periods ranging from 30 days to one year. The following table summarizes the activity related to the product warranty liability during the fiscal years ended December 31, 2009, 2008 and 2007:

<i>(In thousands)</i>	2009	2008	2007
Beginning of year	\$ 1,112	\$ 1,306	\$ 1,824
Accrual for warranties issued during the period	1,238	2,221	1,742
Adjustment of previously recorded accruals	(709)	(878)	(1,170)
Settlements during the year	(764)	(1,537)	(1,090)
End of year	<u>\$ 877</u>	<u>\$ 1,112</u>	<u>\$ 1,306</u>

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### (11) FINANCING ARRANGEMENTS

Short-term borrowings at December 31, 2009 and 2008 consist of the following:

<u>(In thousands)</u>	<u>2009</u>	<u>2008</u>
Bank borrowings, denominated in Japanese yen with an average interest rate of 1.3%	\$ 5,421	\$ —
Bank borrowings, denominated in Korean won with an interest rate of 2.2%	343	—
Promissory note payable, denominated in Korean won with an interest rate of 6%	2,275	—
Total short-term borrowings	<u>\$ 8,039</u>	<u>\$ —</u>

Long-term debt at December 31, 2009 and 2008 consists of the following:

<u>(In thousands)</u>	<u>2009</u>	<u>2008</u>
Revolving credit agreement with interest of Prime rate plus a Prime margin ranging from 1% to 1.5% through November 2011	\$ 17,406	\$ 139,000
Revolving credit agreement with interest of LIBOR rate plus a LIBOR margin ranging from 1% to 1.5% through November 2011	35,000	—
Bank loan denominated in Japanese yen with interest of 1.43% through November 2010	10,841	22,128
Stock redemption notes payable with interest of 8% through December 2010	416	835
Bank loan denominated in Korean won with interest of 2.15% through January 2010	86	—
Small Business Administration loans with interest ranging from 5.5% to 7.35%, fully repaid in 2009	—	1,719
Total long-term debt	<u>63,749</u>	<u>163,682</u>
Less current maturities of long-term debt	<u>11,257</u>	<u>13,166</u>
Long-term debt less current maturities	<u>\$ 52,492</u>	<u>\$ 150,516</u>

Annual maturities of long-term debt as of December 31, 2009, are as follows:

<u>Fiscal year ending</u>	<u>(In thousands)</u>
2010	\$ 11,257
2011	52,492
	<u>\$ 63,749</u>

On March 2, 2009, the Company amended and restated its credit agreement (as amended from time to time, the Restated Credit Agreement) with Wells Fargo Bank, National Association, as agent, and certain other banks. The Restated Credit Agreement provided for a maximum \$150.0 million revolving credit facility maturing November 1, 2011, replacing the Company's previous \$230.0 million revolving credit facility maturing February 15, 2013.

Under the terms of the Restated Credit Agreement, the initial revolving commitment amount was \$150 million, with \$11.0 million unavailable without the consent of a majority of lenders. The Company's ability to borrow was further restricted by a borrowing base, which is adjusted based on the Company's levels of qualifying domestic accounts receivable, inventories and value of its property, plant and equipment.

On July 17, 2009, the Company amended the Restated Credit Agreement with its lenders. The amendment adjusts the manner in which the Company calculates the fixed asset component of its borrowing base under the Restated Credit Agreement. The adjustment to the fixed asset component of the borrowing base includes step-downs in the Company's fixed asset valuation as of the last day of fiscal October 2009, January 2010 and April

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2010 of \$4.0 million, \$4.0 million and \$3.2 million, respectively. The step-downs in fixed asset valuation could result in the overall borrowing cap being adjusted downward over time, depending on fluctuations to the Company's other borrowing base components. The July amendment also permitted the acquisition of Pureline Co. Ltd. as described in Note 3 above.

On August 11, 2009, the Company amended its Restated Credit Agreement with its lenders. Prior to the August 11, 2009 amendment to the Restated Credit Agreement, the Company was prohibited from issuing debt securities and was required to use 100% of the net proceeds received in any equity offering to prepay amounts outstanding under the Restated Credit Agreement. In addition, the borrowing base and, therefore, the funds available to the Company under the Agreement, would have been reduced by 100% of the net proceeds of any equity offering, but the revolving commitment amounts would not have been affected.

The August 11, 2009 amendment permits the Company to issue unsecured convertible debt securities (Qualifying Debt Offering) subject to the satisfaction of certain conditions, which include, among others, the Company's compliance with the financial covenants contained in the Restated Credit Agreement and the receipt by the Company of at least \$75.0 million in net proceeds from a Qualifying Debt Offering. The Company will be required to use 100% of the net proceeds from any Qualifying Debt Offering or equity offering to prepay amounts outstanding under the Agreement. In addition, the borrowing base was amended to provide that it will be reduced by (i) 50% of the net proceeds of any Qualifying Debt Offering or equity offering received by the Company on or before August 15, 2010 and (ii) 100% of the net proceeds of any Qualifying Debt Offering or equity offering received by the Company thereafter. The borrowing base will not be reduced by more than \$65 million in total in the event of any such offering(s). In addition, the revolving commitment amounts under the Restated Credit Agreement will be reduced by 50% of the receipts of any Qualifying Debt Offering or equity offering received by the Company on or before August 15, 2010.

As described in Note 17 to the consolidated financial statements, on September 16, 2009, the Company issued 16.1 million shares of common stock for \$3.80 per share in a registered public offering. The Company received net proceeds of \$56.6 million after deducting underwriting fees and other offering costs of \$4.5 million. All of these proceeds were applied to pay down the outstanding balance under the Restated Credit Agreement. In addition, under the terms of the Restated Credit Agreement, as per the August 11, 2009 revision, the revolving commitment decreased by 50% of the net proceeds, or \$28.3 million, to \$121.7 million. \$11.0 million of revolving commitment can not be borrowed unless a majority of the lenders consent. The revolving commitment is further restricted by the Company's borrowing base.

The Company had outstanding borrowings under the Restated Credit Agreement of approximately \$52.4 million as of December 31, 2009, with an additional \$1.5 million undrawn on outstanding letters of credit. The Company's borrowing base supported \$106.6 million in total availability as of December 31, 2009.

The full amount outstanding under the Agreement is due on November 1, 2011. While the Restated Credit Agreement allows the Company some flexibility to raise additional capital, there is no assurance that adequate additional capital would be available on reasonable terms, on a timely basis or at all.

The financial covenants in the Restated Credit Agreement replaced those in the prior credit agreement. Through December 31, 2009, the Company was in compliance with all applicable debt covenants of the Restated Credit Agreement.

The Restated Credit Agreement requires that the Company not exceed certain negative year-to-date EBITDA amounts in 2009 and in January 2010 and that the Company exceed certain positive year-to-date EBITDA amounts at prescribed levels on a monthly basis from February 2010 through March 2010. Under the Restated Credit Agreement EBITDA is calculated by adding consolidated net income attributable to Entegris, Inc., depreciation, amortization, share-based compensation expense, interest expense, income taxes, non-cash gains and losses, extraordinary gains and losses, non-recurring expenses associated with a permitted acquisition,



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foreign exchange expense and certain expenses related to the Restated Credit Agreement. Non-cash gains and losses include adjustments to the Company's excess and obsolete inventory reserves and allowances for doubtful accounts, and impairment charges of long-lived assets and investments. In addition, the credit agreement allows the add-back of up to \$1.0 million in restructuring charges.

The EBITDA covenant levels required by the Restated Credit Agreement are indicated in the table below. The Company's actual year-to-date EBITDA, as defined by the Restated Credit Agreement, was \$22.0 million at December 31, 2009.

<u>Period ending</u>	<u>(In thousands)</u>
<u>Fiscal 2009 year-to-date EBITDA levels</u>	
December 2009	(56,000)
<u>Fiscal 2010 year-to-date EBITDA levels</u>	
January 2010	\$ (3,000)
February 2010	2,000
March 2010	7,000

Beginning in the second quarter of 2010, the foregoing minimum EBITDA covenants expire, and the Restated Credit Agreement requires 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. The cash flow leverage ratio measures the sum of short-term borrowings, long-term debt and capital lease obligations divided by the most recent two fiscal quarters' EBITDA (as defined above) multiplied by two. The fixed charge coverage ratio measures the sum of EBITDA (as defined above) and lease expense less the sum of capital expenditures and income tax payments, which figure in turn is divided by the sum of interest expense, lease expense and scheduled principal payments.

In addition to the financial metric covenants required under the Restated Credit Agreement, the Company is restricted from making capital expenditures in excess of \$20.0 million in both 2010 and 2011 plus certain unused amounts from the prior period (\$7.2 million for 2010). The Company must also maintain a minimum of \$25.0 million in domestic cash balances under the terms of the Restated Credit Agreement.

Under the terms of the Restated Credit Agreement, the Company may elect that the loans comprising each borrowing bear interest at a rate per annum equal to either (a) the sum of 4.25% plus a base rate equal to the highest of: (i) the prime rate then in effect, (ii) the Federal Funds rate then in effect plus 1.25%, (iii) the one-month LIBOR rate then in effect plus 1.25% or (iv) 3.25%; or (b) the sum of 5.25% plus the greater of the LIBOR rate then in effect or 1.50%.

As of December 31, 2009, the weighted average interest rate on outstanding borrowings under the Restated Credit Agreement was 7.00%. In addition, the Company pays a commitment fee of 0.75% on the unborrowed commitments under the Restated Credit Agreement.

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

At all times the borrowers and guarantors must maintain certain minimum cash and cash equivalents. The Restated Credit Agreement also includes limitations on the amount of cash and cash equivalents of the Company and its foreign subsidiaries.

In addition, the Restated Credit Agreement includes negative covenants, subject to exceptions, restricting or limiting the Company's ability and the ability of its subsidiaries to, among other things, sell assets; make capital expenditures; alter the business the Company conducts; engage in mergers, acquisitions and other business

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combinations; declare dividends or redeem or repurchase capital stock; incur, assume or permit to exist additional indebtedness or guarantees; make loans and investments; incur liens; and enter into transactions with affiliates.

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

During the fourth quarter of 2007, the Company executed a 3.0 billion yen (\$26.7 million) unsecured term note agreement with a Japanese bank. Under the note agreement, the Company will make semi-annual payments in May and November each year of 500 million yen (\$4.7 million) through November 2010, along with interest at a rate of 1.43%. Borrowings outstanding under this agreement at December 31, 2009 and December 31, 2008 were \$10.8 million and \$22.1 million, respectively.

The Company has entered into unsecured line of credit agreements, which expire at various dates, with three international commercial banks, which provide for aggregate borrowings of 700 million Korean won and 1.5 billion Japanese yen for its foreign subsidiaries, which is equivalent to \$16.9 million as of December 31, 2009. Interest rates for these facilities are based on a factor of the banks' reference rates. Borrowings outstanding under international line of credit agreements at December 31, 2009 and December 31, 2008, were \$5.8 million and none, respectively.

### **(12) LEASE COMMITMENTS**

As of December 31, 2009, the Company was obligated under noncancellable operating lease agreements for certain sales offices and manufacturing facilities, manufacturing equipment, vehicles, information technology equipment and warehouse space. Future minimum lease payments for noncancellable operating leases with initial or remaining terms in excess of one year are as follows:

<u>Fiscal year ending December 31</u>	<u>(In thousands)</u>
2010	\$ 7,496
2011	4,011
2012	3,266
2013	2,671
2014	653
Thereafter	8
Total minimum lease payments	<u>\$ 18,105</u>

Total rental expense for all equipment and building operating leases for the years ended December 31, 2009, 2008, and 2007, were \$12.6 million, \$12.3 million, \$14.0 million, respectively. Rent expense for the year ended December 31, 2009 included \$1.0 million related to lease buy-outs associated with the Company's closure of one of its manufacturing facilities in Chaska, Minnesota (see Note 13 to the Company's consolidated financial statements). These costs were classified as restructuring charges.

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### (13) RESTRUCTURING COSTS

For the years ended December 31, 2009, 2008, and 2007, the accrued liabilities, provisions and payments associated with the employee severance and retention costs of the Company's restructuring activities as described in further detail below were as follows:

<i>(In thousands)</i>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Accrued liabilities at beginning of period	\$ 12,696	\$ 6,209	\$ 6,497
Provision	5,717	16,597	7,980
Payments	(15,792)	(10,110)	(8,268)
Accrued liabilities at end of period	<u>\$ 2,621</u>	<u>\$ 12,696</u>	<u>\$ 6,209</u>

#### *Global restructuring and cost reduction initiatives*

In the third quarter of 2008, the Company announced the appointment of a new Chief Operating Officer. In conjunction with this change in executive management, the Company initiated a global business restructuring of its sales and marketing functions, manufacturing operations, and realignment of its global supply chain and related ancillary operational functions. The Company has incurred employee termination and other costs in connection with this business restructuring, as well as actions taken in response to the downturn in the semiconductor industry that began during the second half of 2008.

The Company announced on November 4, 2008 that it would close the larger of its two manufacturing facilities in Chaska, Minnesota and will transfer the related production to its other existing facilities. The closure, which impacted approximately 200 positions in the Company's worldwide workforce, was completed at the end of 2009. Associated with these changes, the Company recorded \$10.4 million in the year ended December 31, 2008 related to employee severance and retention costs (generally over the employees' required remaining term of service) that were classified as restructuring charges. In the first quarter of 2009, the Company announced workforce reductions in Asia and Japan, which affected approximately 132 positions. In the second quarter of 2009, the Company announced additional global workforce reductions, affecting approximately 100 positions. In connection with the above actions, the Company recorded charges related to employee severance costs of \$4.7 million for the year ended December 31, 2009, which were classified as restructuring charges.

For the years ended December 31, 2009, 2008, and 2007, the summary of the Company's costs associated with its global restructuring and cost reduction initiatives classified as restructuring charges in the statement of operations was as follows:

<i>(In thousands)</i>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Severance and retention costs	\$ 4,713	\$ 10,423	—
Costs associated with transfer of production	6,468	—	—
Accelerated depreciation expense	1,362	—	—
Lease buyouts and other	2,920	—	—
Restructuring charges	<u>\$ 15,463</u>	<u>\$ 10,423</u>	<u>—</u>

The Company's facility in Chaska became available for sale during the fourth quarter ended December 31, 2009 and was classified in assets held for sale at December 31, 2009 at a carrying value of \$6.0 million.

#### *Selling, general and administrative expense reductions*

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

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### *Gilroy Cleaning Service Facility*

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

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

The Company's facility in Gilroy became available for sale during the first quarter ended March 29, 2008 and was classified in assets held for sale at December 31, 2008 at a carrying value of \$2.5 million. During the second quarter of 2009, the Company sold the facility for \$2.3 million.

### *Bad Rappenau Facility*

In November 2005, the Company announced that during 2006 it would close its manufacturing plant located in Bad Rappenau, Germany and relocate the production of products made in that facility to other existing manufacturing plants located in the United States and Asia. In addition, the Company moved its Bad Rappenau administrative center to Dresden, Germany. In connection with these actions, the Company incurred charges of \$7.5 million for employee severance and retention costs (generally over the employees' required remaining term of service) and asset impairment and accelerated depreciation.

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

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

## (14) INTEREST (EXPENSE) INCOME, NET

Interest (expense) income, net for the years ended December 31, 2009, 2008 and 2007 consists of the following:

<u>(In thousands)</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Interest income	\$ 225	\$ 1,796	\$ 7,815
Interest expense	(9,440)	(2,814)	(2,570)
Interest (expense) income, net	<u>\$ (9,215)</u>	<u>\$ (1,018)</u>	<u>\$ 5,245</u>

Interest expense for the years ended December 31, 2009 included \$2.1 million related to the amortization of capitalized debt issuance costs incurred in connection with the Company's credit agreements.

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### (15) OTHER (EXPENSE) INCOME, NET

Other income (expense), net for the years ended December 31, 2009, 2008 and 2007 consists of the following:

<i>(In thousands)</i>	2009	2008	2007
(Loss) gain on foreign currency remeasurement	\$ (1,291)	\$ (4,442)	\$ 1,196
Gain on sale of equity investments	—	—	6,068
Impairment loss on equity investments	(1,000)	(11,102)	—
Other, net	546	58	392
Other (expense) income, net	<u>\$ (1,745)</u>	<u>\$ (15,486)</u>	<u>\$ 7,656</u>

The losses and gain on foreign currency remeasurement for the years ended December 31, 2009, 2008 and 2007 mainly reflect foreign currency transaction effects of the remeasurement of yen-denominated assets and liabilities held by the Company's U.S. entity.

In December 2009, the Company determined that one of its equity investments was totally impaired and recorded an impairment loss of \$1.0 million. During 2008, the Company determined that four of its equity investments were partially or totally impaired. The Company recorded impairment losses of \$11.1 million. In 2007 the Company recorded a gain of \$6.1 million on the sale of the Company's interest in a privately held equity investment accounted for using the cost method. Proceeds from the sale totaled \$6.6 million.

### (16) INCOME TAXES

(Loss) income before income taxes for the years ended December 31, 2009, 2008 and 2007 was derived from the following sources:

<i>(In thousands)</i>	2009	2008	2007
Domestic	\$ (43,321)	\$ (511,412)	\$ 2,563
Foreign	(16,567)	14,999	54,056
(Loss) income before income taxes	<u>\$ (59,888)</u>	<u>\$ (496,413)</u>	<u>\$ 56,619</u>

Income tax (benefit) expense for the years ended December 31, 2009, 2008, and 2007 is summarized as follows:

<i>(In thousands)</i>	2009	2008	2007
Current:			
Federal	\$ (1,061)	\$ (104)	6,612
State	114	(608)	3,122
Foreign	(370)	4,263	21,056
	<u>(1,317)</u>	<u>3,551</u>	<u>30,790</u>
Deferred (net of valuation allowance):			
Federal	—	11,124	(18,974)
State	—	(1,879)	(72)
Foreign	(1,679)	6,405	(1,388)
	<u>(1,679)</u>	<u>15,650</u>	<u>(20,434)</u>
Income tax (benefit) expense	<u>\$ (2,996)</u>	<u>\$ 19,201</u>	<u>\$ 10,356</u>

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Income tax (benefit) expense differs from the expected amounts based upon the statutory federal tax rates for the years ended December 31, 2009, 2008, and 2007 as follows:

<i>(In thousands)</i>	2009	2008	2007
Expected federal income tax at statutory rate	(20,961)	(173,746)	19,817
State income taxes before valuation allowance, net of federal tax effect	(1,708)	(3,128)	1,983
Losses without tax benefit	(1,240)	—	—
Effect of foreign source income	4,009	1,416	(2,637)
Goodwill impairment	—	147,811	—
Tax effect of foreign dividend	(153)	3,594	(11,175)
Valuation allowance	16,579	42,093	—
Other items, net	478	1,161	2,368
Income tax (benefit) expense	<u>\$ (2,996)</u>	<u>\$ 19,201</u>	<u>\$ 10,356</u>

During 2009, the Company recorded a \$14.9 million valuation allowance against its deferred tax assets. The Company carried a \$42.7 million valuation allowance against its deferred tax assets as of December 31, 2008. The unrecognized deferred tax assets relate primarily to net operating loss carryovers, general business credit carryovers, and tax credits carryforwards.

Generally, the provisions of ASC 740, *Income Taxes*, require deferred tax assets to be reduced by a valuation allowance if, based on the weight of available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. ASC 740 requires an assessment of all available evidence, both positive and negative, to determine the amount of any required valuation allowance.

As a result of the recent general economic and industry declines, and their impact on the Company's future outlook, management has reviewed its deferred tax assets and concluded that the uncertainties related to the realization of certain of its assets are still unfavorable. As of December 31, 2009 and 2008, the Company has a U.S. net deferred tax asset position of \$57.2 million and \$42.3 million, respectively, which is composed of temporary differences and various credit carryforwards. Management has considered the positive and negative evidence for the potential utilization of the net deferred tax asset based upon an application of the principles of ASC 740. Management has concluded that it is not more likely than not that the Company will realize the net deferred tax asset and thus is required to provide an allowance for a portion of the net deferred tax assets management has concluded will not be utilized. As a result, the Company recorded a deferred tax asset valuation allowance charge of \$15.1 million and \$42.1 million against U.S. deferred tax assets for the year ended December 31, 2009 and 2008, respectively, of which \$16.8 million is included in income tax expense from continuing operations and \$1.7 million included as a tax benefit in additional paid-in-capital for 2009.

As of December 31, 2009 and 2008, the Company had a net non-U.S. deferred tax asset position of \$14.9 million and \$12.5 million, respectively, in which management determined based upon the available evidence a valuation allowance of \$0.4 million and \$0.6 million as of December 31, 2009 and 2008, respectively, were required against the non-U.S. deferred tax assets. For other non-U.S. jurisdictions, management is relying upon projections of future taxable income to utilize deferred tax assets. Estimated taxable income of \$42.0 million will be necessary to utilize the non-U.S. deferred tax assets, of which an estimated \$32.5 million is related to Nihon Entegris KK.

As a result of commitments made by the Company related to investments in tangible property and equipment (approximately \$43 million by December 31, 2010), the establishment of a research and development center in 2006 and certain employment commitments through 2010, income from certain manufacturing activities in Malaysia is exempt from tax for years up through 2015. The income tax benefits attributable to the tax status of this subsidiary are estimated to be none, none, and \$2.1 million (2 cents per diluted share) for the years ended December 31, 2009, 2008, and 2007, respectively.

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\$0.5 million and \$0.2 million was added to additional paid-in capital in accordance with ASC 718 reflecting tax differences relating to employee stock option and restricted stock award transactions for the years ended December 31, 2009 and 2007, respectively. \$2.5 million was charged to additional paid-in capital in accordance with ASC 718 reflecting tax differences relating to employee stock option and restricted stock award transactions for the year ended December 31, 2008.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at December 31, 2009 and 2008 are as follows:

<u>(In thousands)</u>	<u>2009</u>	<u>2008</u>
Deferred tax assets attributable to:		
Accounts receivable	\$ 818	\$ 760
Inventory	3,116	3,305
Intercompany profit	273	1,896
Accruals not currently deductible for tax purposes	8,206	12,212
Net operating loss and credit carryforwards	44,895	26,742
Depreciation	1,806	4,501
Equity compensation	3,099	2,957
Asset impairments	4,397	4,024
Other, net	5,945	5,777
Gross deferred tax assets	72,555	62,174
Valuation allowance	(57,587)	(42,676)
Total deferred tax assets	<u>14,968</u>	<u>19,498</u>
Deferred tax liabilities attributable to:		
Repatriation reserve	—	3,628
Purchased intangible assets	419	5,450
Total deferred tax liabilities	<u>419</u>	<u>9,078</u>
Net deferred tax assets	<u>\$ 14,549</u>	<u>\$ 10,420</u>

In, 2007, the Company's Japanese subsidiary, Nihon Entegris KK (NEKK) declared and paid a dividend of 6.8 billion yen (approximately U.S. \$60 million) and loaned 4.6 billion yen (approximately U.S. \$40 million) to the Company. The dividend and loan were funded from available cash and lines of credit established with Japanese banks. Prior to the declaration of the dividend, the accumulated undistributed earnings of NEKK were considered to be reinvested indefinitely as allowed by the provisions of ASC 740, such that no U.S. tax effect had been provided with respect to such accumulated undistributed NEKK earnings. The dividend and loan transactions resulted in a recharacterization of \$100 million of NEKK's accumulated undistributed earnings as no longer being indefinitely reinvested, resulting in a 2007 U.S. tax benefit of approximately \$9.4 million after reduction for state taxes of \$1.9 million.

On December 24, 2008, NEKK loaned 2.0 billion yen (approximately U.S. \$22 million) to the Company. The loan was funded from available cash and lines of credit established with Japanese banks. The loan transaction resulted in a recharacterization of \$22 million of NEKK's accumulated undistributed earnings as no longer being indefinitely reinvested.

At December 31, 2009, there were approximately \$128.4 million of accumulated undistributed earnings of subsidiaries outside the United States that are considered to be reinvested indefinitely. Management has considered its future cash needs and affirms its intention to indefinitely invest such earnings overseas to be utilized for working capital purposes, expansion of existing operations, possible acquisitions and servicing local bank debt. No U.S. tax has been provided on such earnings. If they were remitted to the Company, applicable

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U.S. federal and foreign withholding taxes may be partially offset by available foreign tax credits. Management has concluded that it is impracticable to compute the full actual tax impact, but it has estimated that \$5.4 million of withholding taxes would be incurred if the \$128.4 million were distributed.

At December 31, 2009, the Company had state operating loss carryforwards of approximately \$36.8 million, which begin to expire in 2011; foreign tax credit carryforwards of approximately \$36.5 million, which begin to expire in 2018; alternative minimum tax credit carryforwards of approximately \$0.4 million; federal research tax credit carryforwards of approximately \$3.2 million, which begin to expire in 2021; and foreign operating loss carryforwards of \$7.0 million, \$2.1 million of which will not expire under current law and \$4.9 million which begin to expire in 2014.

The Company adopted certain provisions of ASC 740 effective January 1, 2007. These provisions prescribe a recognition threshold and a measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Benefits from tax positions should be recognized in the financial statements only when it is more likely than not that the tax positions will be sustained upon examination by the appropriate taxing authority that would have full knowledge of all relevant information. A tax position that meets the more-likely-than-not recognition threshold is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. Tax positions that previously failed to meet the more-likely-than-not recognition threshold should be recognized in the first subsequent financial reporting period in which that threshold is met. Previously recognized tax positions that no longer meet the more-likely-than-not recognition threshold should be derecognized in the first subsequent financial reporting period in which that threshold is no longer met. The provisions also provide guidance on the accounting for and disclosure of unrecognized tax benefits, interest and penalties.

Reconciliations of the beginning and ending balances of the total amounts of gross unrecognized tax benefits for the years ended December 31, 2009 and 2008 are as follows:

<i>(In thousands)</i>	<u>2009</u>	<u>2008</u>
Gross unrecognized tax benefits at beginning of year	\$5,539	\$ 16,633
Increases in tax positions for prior years	52	567
Decreases in tax positions for prior years	(317)	(10,563)
Increases in tax positions for current year	28	1,004
Settlements	(122)	(297)
Lapse in statute of limitations	(916)	(1,805)
Gross unrecognized tax benefits at end of year	<u>\$4,264</u>	<u>\$ 5,539</u>

The total amount of net unrecognized tax benefits that, if recognized, would affect the effective tax rate was \$3.6 million at December 31, 2009.

The Company's policy for recording interest and penalties associated with audits is to record such items as a component of income before taxes. Penalties are recorded in other expense or income, and interest paid or received is recorded in interest expense or interest income, respectively, in the statement of operations. For the years ended December 31, 2009 and 2008, the Company has accrued interest and penalties related to unrecognized tax benefits of \$1.6 million and \$1.9 million, respectively. \$(0.3) million and \$0.6 million of interest and penalties were recognized in the statement of operations for the years ended December 31, 2009 and 2008, respectively.

The Company files income tax returns in the U.S. and in various state, local and foreign jurisdictions. The statute of limitations related to the consolidated Federal income tax return is closed for all years up to and including 2005. With respect to foreign jurisdictions, the statute of limitations varies from country to country, with the earliest open year for the Company's major foreign subsidiaries being 2004.



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Due to the potential for resolution of a foreign examination and the expiration of various statutes of limitations, it is reasonably possible that the Company's gross unrecognized tax benefit balance may decrease within the next twelve months by approximately \$1.8 million

### **(17) EQUITY**

#### **Equity Offering**

On September 16, 2009, the Company issued 16.1 million shares of common stock for \$3.80 per share in a registered public offering. The Company received net proceeds of \$56.6 million after deducting underwriting fees and other offering costs of \$4.5 million. As required by the terms of the Company's revolving credit facility, the proceeds were used to reduce the amount outstanding under the Company's revolving credit facility.

#### **Share Repurchase Program**

In May 2007, the Company's Board of Directors authorized a self-tender offer program to acquire up to \$250 million of the Company's common stock. A modified "Dutch Auction" tender offer began on May 11, 2007 and expired on June 8, 2007, and was subject to the terms and conditions described in the offering materials mailed to the Company's shareholders and filed with the Securities and Exchange Commission. The tender offer was completed on June 14, 2007 with the Company purchasing 21.1 million shares of its common stock at a price of \$11.80 per share. The Company incurred \$2.3 million in costs associated with the tender offer for a total cost of approximately \$251.4 million.

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

#### **Share-based Compensation Expense**

The Company follows ASC 718 which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors including employee stock options and employee stock purchases related to the Employee Stock Purchase Plan (employee stock purchases) to be based on estimated fair values. Share-based compensation expense recorded under ASC 718 for the years ended December 31, 2009, 2008 and 2007 was \$8.1 million, \$7.4 million and \$10.5 million, respectively.

ASC 718 requires companies to estimate the fair value of share-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods in the Company's consolidated statement of operations.

Share-based compensation expense is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Share-based compensation expense recognized in the Company's Consolidated Statement of Operations for the years ended December 31, 2009, 2008 and 2007 includes compensation expense for share-based payment awards granted prior to, but not yet vested as of August 27, 2005 based on the grant date fair value estimated in accordance with the pro forma provisions of ASC 718.

Share-based payment awards in the form of restricted stock awards for 2.7 million shares, 0.8 million shares, and 0.9 million shares were granted to employees during the years ended December 31, 2009, 2008 and 2007, respectively. During the year ended December 31, 2009, Entegris, Inc. awarded no performance stock. Share-based payment awards in the form of stock awards subject to performance conditions for up to 0.5 million shares and 0.9 million shares were granted to certain employees during the years ended December 31, 2008 and 2007, respectively.

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Share-based payment awards in the form of stock option awards for 1.5 million and 0.9 million options were granted to employees during the year ended December 31, 2009 and 2008, respectively, with no stock options granted during the year ended December 31, 2007. Compensation expense is based on the grant date fair value estimated in accordance with the provisions of ASC 718.

In conjunction with the adoption of the provisions of ASC 718 the Company changed its method of attributing the value of share-based compensation to expense from the accelerated multiple-option approach to the straight-line single option method. Compensation expense for all share-based payment awards granted on or prior to August 27, 2005 is recognized using the accelerated multiple-option approach, while compensation expense for all share-based payment awards granted subsequent to August 27, 2005 is recognized using the straight-line single-option method. Because share-based compensation expense recognized in the Consolidated Statement of Operations for the years ended December 31, 2009, 2008 and 2007 is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. ASC 718 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

### **Employee Stock Purchase Plan**

The Company has the Entegris, Inc. Employee Stock Purchase Plan (ESPP). A total of 4.0 million common shares are reserved for issuance under the ESPP. The ESPP allows employees to elect, at six-month intervals, to contribute up to 10% of their compensation, subject to certain limitations, to purchase shares of common stock at the lower of 85% of the fair market value on the first day or last day of each six-month period. The Company treats the ESPP as a compensatory plan under ASC 718. As of December 31, 2009, 2.1 million shares had been issued under the ESPP. At December 31, 2009, 1.9 million shares remained available for issuance under the ESPP. Employees purchased 0.6 million shares, 0.3 million shares, and 0.2 million shares, at a weighted-average price of \$1.90, \$6.37, and \$8.63. during the years ended December 31, 2009, 2008 and 2007, respectively.

### **Employee Stock Option Plans**

As of December 31, 2009, the Company had outstanding stock awards under five stock incentive plans: the Entegris, Inc. 1999 Long-Term Incentive and Stock Option Plan (the 1999 Plan), the Entegris, Inc. Outside Directors' Option Plan (the Directors' Plan) and three former Mykrolis stock option plans assumed by the Company on August 10, 2005: The 2001 Equity Incentive Plan (the 2001 Plan), the 2003 Employment Inducement and Acquisition Stock Option Plan (the Employment Inducement Plan) and the 2001 Non-Employee Director Stock Option Plan (the 2001 Directors Plan). New common shares will be issued under the respective plans upon the timely exercise of outstanding stock options or vesting of restricted stock awards. The plans are described in more detail below. On December 17, 2009 the Company's Board of Directors approved the 2010 Stock Plan, subject to the approval of the Company's stockholders. If the stockholders approve the 2010 Stock Plan, it will replace the above existing plans for future stock awards and stock option grants.

*1999 Plan:* The 1999 Plan provided for the issuance of share-based awards to selected employees, directors, and other persons (including both individuals and entities) who provide services to the Company or its affiliates. Under the 1999 Plan, the Board of Directors determined the number of shares for which each option is granted, the rate at which each option is exercisable and whether restrictions were imposed on the shares subject to the awards. The term of options issued under the 1999 Plan was ten years, generally exercisable ratably in 25% increments over the 48 months following grant, with exercise prices equal to 100% of the fair market value of the Company's common stock on the date of grant. The 1999 Plan expired under its terms in 2009, subject to the exercise, cancellation, or expiration of outstanding awards.

*The Directors' Plan and the 2001 Directors Plan:* The Directors' Plan provided for the grant to each outside director of an option to purchase 15,000 shares on the date the individual becomes a director and for the annual grant to each outside director, at the choice of the Directors' Plan administrator (defined as the Board of Directors or a committee of the Board), of either an option to purchase 9,000 shares, or a restricted stock award of up to 3,000 shares. Options were exercisable six months subsequent to the date of grant. Under the Directors'

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Plan, the term of options was ten years and the exercise price for shares was not to be less than 100% of the fair market value of the common stock on the date of grant of such option. The 2001 Directors Plan provided for the grant to each newly elected eligible director of options to purchase 15,000 shares of common stock on the date of his or her first election and for the annual grant of options to purchase 10,000 shares of common stock for each subsequent year of service as a director. The exercise price of the stock options was not to be less than the fair market value of the stock at the date of grant. On May 6, 2008 the Company's Board of Directors determined that the standard annual equity compensation paid to non-employee directors would be an aggregate of \$100,000 worth of restricted stock on the date of grant, inclusive of the amounts specified in the above described plans. The Directors' Plan expired under its terms in 2009, subject to the exercise, cancellation, or expiration of outstanding awards.

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

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

### *Millipore Plan*

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

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**General Option Information**

Option activity for the 1999 Plan, 2001 Plan, the Employment Inducement Plan, the 2001 Directors Plan, the Millipore plan and the Directors' Plan for the years ended December 31, 2009, 2008 and 2007 is summarized as follows:

	2009		2008		2007	
	Number of shares	Weighted average exercise price	Number of shares	Weighted average exercise price	Number of shares	Weighted average exercise price
<i>(Shares in thousands)</i>						
Options outstanding, beginning of year	6,689	\$ 8.30	8,396	\$ 8.70	12,805	\$ 8.19
Granted	1,545	1.13	938	6.58	—	—
Exercised	(46)	4.80	(341)	4.21	(3,972)	6.78
Canceled	(1,525)	7.67	(2,304)	9.67	(437)	11.28
Options outstanding, end of year	6,663	\$ 6.80	6,689	\$ 8.30	8,396	\$ 8.70
Options exercisable, end of year	4,595	\$ 8.75	5,871	\$ 8.55	8,228	\$ 8.70

Options outstanding for the 1999 Plan, 2001 Plan, the Employment Inducement Plan, the 2001 Directors Plan, the Millipore plan and the Directors' Plan at December 31, 2009 are summarized as follows:

<i>(Shares in thousands)</i>	Options outstanding			Options exercisable	
	Number outstanding	Weighted average remaining life in years	Weighted-average exercise price	Number exercisable	Weighted average exercise price
<b>Range of exercise prices</b>					
\$1.13 to \$3.08	1,615	6.1 years	\$ 1.17	18	\$ 2.10
\$4.61 to \$7.68	1,908	2.8 years	6.42	1,437	6.26
\$7.69 to \$9.22	1,390	2.6 years	8.33	1,390	8.33
\$9.23 to \$15.38	1,750	1.9 years	11.20	1,750	11.20
	6,663	3.3 years		4,595	

The weighted average remaining contractual term for options outstanding and exercisable for all plans at December 31, 2009 was 3.3 years and 2.2 years, respectively.

For all plans, the Company had shares available for future grants of 9.3 million shares, 11.0 million shares, and 8.9 million shares at December 31, 2009, December 31, 2008, and December 31, 2007, respectively.

For all plans, the total pretax intrinsic value of stock options exercised during the years ended December 31, 2009 and 2008 was \$6 thousand and \$1.1 million, respectively. The aggregate intrinsic value, which represents the total pretax intrinsic value based on the Company's closing stock price of \$5.28 at December 31, 2009, which theoretically could have been received by the option holders had all option holders exercised their options as of that date, was \$6.6 million and \$0.1 million for options outstanding and options exercisable, respectively. The total number of in-the-money options exercisable as of December 31, 2009 was 18 thousand.

During the years ended December 31, 2009, 2008 and 2007 certain existing stock option grants and restricted stock awards were modified in connection with the execution of various severance and separation agreements. Under the agreements, the terms of unvested and vested stock option grants were modified with no future service required by the affected individuals. Accordingly, under the measurement principles for shares-based compensation, incremental share-based compensation expense of \$25 thousand, \$0.4 million and \$0.1 million, respectively, was recognized for the value of the modified stock option grants at the date of the agreements' execution.

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During the years ended December 31, 2009, 2008 and 2007 the Company received cash from the exercise of stock options totaling \$0.2 million, \$1.4 million, and \$28.1 million, respectively. During the years ended December 31, 2009, 2008 and 2007, the Company received cash of \$1.1 million, \$1.7 million, and \$1.8 million, respectively, in employee contributions to the Entegris, Inc. Employee Stock Purchase Plan.

**Restricted Stock Awards**

Restricted stock awards are awards of common stock that are subject to restrictions on transfer and to a risk of forfeiture if the awardee terminates employment with the Company prior to the lapse of the restrictions. The value of such stock is determined using the market price on the grant date. Compensation expense is recorded over the applicable restricted stock vesting periods. Accordingly, compensation expense for restricted stock awards granted on or prior to August 27, 2005 are recorded using the accelerated multiple-option approach, while compensation expense for restricted stock awards granted subsequent to August 27, 2005 are recognized using the straight-line single-option method. A summary of the Company's restricted stock activity for the years ended December 31, 2009, 2008 and 2007 is presented in the following table:

*(Shares in thousands)*

	2009		2008		2007	
	Number of Shares	Weighted average grant date fair value	Number of Shares	Weighted average grant date fair value	Number of shares	Weighted average grant date fair value
Unvested, beginning of year	1,551	\$ 9.06	1,873	\$ 10.89	1,950	\$ 10.71
Granted	2,690	1.92	797	6.86	897	11.09
Vested	(851)	7.32	(773)	10.88	(801)	10.74
Forfeited	(127)	6.12	(346)	9.83	(173)	10.60
Unvested, end of year	<u>3,263</u>	<u>\$ 3.74</u>	<u>1,551</u>	<u>\$ 9.06</u>	<u>1,873</u>	<u>\$ 10.89</u>

The weighted average remaining contractual term for unvested restricted shares at December 31, 2009 and 2008 was 2.4 years and 2.2 years, respectively.

As of December 31, 2009, the total compensation cost related to nonvested stock options and restricted stock awards not yet recognized was \$1.2 million and \$6.4 million, respectively, that is expected to be recognized over the next 2.2 years on a weighted-average basis. These amounts exclude restricted stock awards for which performance criteria have yet to be determined and, accordingly, grant dates for those awards have not been established.

During the year ended December 31, 2009, Entegris, Inc. awarded no performance stock and during the years ended December 31, 2008 and 2007, Entegris, Inc. awarded performance stock for up to 0.5 million and 0.9 million shares for each year to be issued upon the achievement of performance conditions (Performance Shares) under the Company's stock incentive plans to certain officers and other key employees. The Performance Shares will be earned if, and to the extent that, various financial performance criteria for fiscal years 2007 through 2010 are achieved. The number of performance shares earned in a given year may vary based on the level of achievement of financial performance objectives for that year or multi-year period. If the Company's performance fails to achieve the specified performance threshold, then the Performance Shares allocated to that financial performance criteria are forfeited. Each annual tranche will have its own service period beginning at the date (the grant date) at which the Board of Directors establishes the annual performance targets for the applicable year. Compensation expense to be recorded in connection with the Performance Shares will be based on the grant date fair value of the Company's common stock. Awards of Performance Shares are expensed over the service period based on an evaluation of the probability of achieving the performance objectives.

For Performance Share awards granted in 2007, 50% of the shares are available to be awarded, if and to the extent that two financial performance criteria for fiscal year 2007 are achieved, while the remaining 50% of the shares are available to be awarded if and to the extent that a third financial performance criteria for the three-year

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period including fiscal years 2007 through 2009 is achieved. The number of performance shares earned may vary based on the level of achievement of financial performance criteria indicated. If the Company's performance fails to achieve the specified performance threshold, then the performance shares are forfeited. Compensation expense to be recorded in connection with the 2007 Performance Shares is based on the grant date fair value of the Company's common stock on the date the financial performance criteria were established. All shares earned in connection with the 2007 Performance Share awards are also subject to service conditions. Shares available upon attainment of the financial performance criteria for fiscal year 2007 vest annually over a four-year period, while shares available upon attainment of the financial performance criteria for the three-year period from fiscal years 2007 through 2009 will be three-quarters vested at the end of 2009, with the final 25% vesting in 2010. At December 31, 2007, the Company determined that it achieved one, but not the second, of the financial performance criteria for fiscal year 2007. Consequently, shared-based compensation expense of \$0.6 million and \$0.1 million was recorded in 2007 and 2009, respectively, in connection with the fiscal year 2007 financial performance criteria of the Performance Share awards granted in 2007. At December 31, 2009, the Company determined that the financial performance criteria for the three-year period including fiscal years 2007 through 2009 was not achieved and, consequently, no shared-based compensation expense has been recorded in connection with the third financial performance criteria of the Performance Share awards granted in 2007.

For Performance Share awards granted in 2008, 100% of the shares are available to be awarded if and to the extent that financial performance criteria for the three-year period including fiscal years 2008 through 2010 are achieved. The number of performance shares earned may vary based on the level of achievement of financial performance criteria indicated. If the Company's performance fails to achieve the specified performance threshold, then the performance shares are forfeited. Compensation expense to be recorded in connection with the 2008 Performance Shares is based on the grant date fair value of the Company's common stock on the date the financial performance criteria were established. All shares earned in connection with the 2008 Performance Share awards are also subject to service conditions. Shares available upon attainment of the financial performance criteria for the three-year period from fiscal years 2008 through 2010 will be three-quarters vested at the end of 2010, with the final 25% vesting in 2011. As of December 31, 2009, the Company expects that the financial performance criteria for the three-year period including fiscal years 2008 through 2010 will not be achieved and, consequently, no shared-based compensation expense has been recorded in connection with the Performance Share awards granted in 2008.

### Valuation and Expense Information under ASC 718

The following table summarizes the allocation of share-based compensation expense related to employee stock options, restricted stock awards and grants under the employee stock purchase plan accounted for under ASC 718 for the years ended December 31, 2009, 2008 and 2007:

<i>(In thousands)</i>	2009	2008	2007
Cost of sales	\$ 704	\$ 1,026	\$ 1,800
Engineering, research and development expenses	482	513	180
Selling, general and administrative expenses	6,865	5,836	8,520
Share-based compensation expense	8,051	7,375	10,500
Tax benefit	—	2,751	3,948
Share-based compensation expense, net of tax	<u>\$8,051</u>	<u>\$4,624</u>	<u>\$ 6,552</u>

### Stock options

Share-based payment awards in the form of stock option awards for 1.5 million and 0.9 million options were granted to employees during the years ended December 31, 2009 and 2008, respectively with no stock option awards granted during the year ended December 31, 2007. Compensation expense is based on the grant date fair value estimated in accordance with the provisions of ASC 718. The awards vest annually over a three-year period

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and have a contractual term of 7 years. The Company estimates the fair value of stock options using the Black-Scholes valuation model, consistent with the provisions of ASC 718. Key inputs and assumptions used to estimate the fair value of stock options include the grant price of the award, the expected option term, volatility of the Company's stock, the risk-free rate and the Company's dividend yield. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards, and subsequent events are not indicative of reasonableness of the original estimates of fair value made by the Company. The weighted-average grant date exercise price of options awarded in 2009 and 2008 was \$1.13 and \$6.58, respectively.

The fair value of each stock option grant was estimated at the date of grant using a Black-Scholes option pricing model. The following table presents the weighted-average assumptions used in the valuation and the resulting weighted-average fair value per option granted for the years ended December 31, 2009 and 2008:

<u>Employee stock options:</u>	<u>2009</u>	<u>2008</u>
Volatility	53.9%	37.1%
Risk-free interest rate	1.6%	3.1%
Dividend yield	0%	0%
Expected life	4 years	4 years
Weighted average fair value per option	\$ 0.48	\$ 2.17

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

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

## (18) BENEFIT PLANS

**401(k) Plan** The Company maintains the Entegris, Inc. 401(k) Savings and Profit Sharing Plan (the 401(k) Plan) that qualifies as a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the Plan, eligible employees may defer a portion of their pretax wages, up to the Internal Revenue Service annual contribution limit. Entegris matches 100% of employees' contributions on the first 3% of eligible wages and 50% of employees' contributions on the next 2% of eligible wages, or a maximum match of 4% of the employee's eligible wages. During the first quarter of 2009, the Company reduced by one-half its match of employee

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contributions; later in the quarter the match of employee contributions was eliminated in full for the remainder of the year. The Company's matching contribution was reinstated beginning in January 2010. In addition to the matching contribution, the Company's Board of Directors may, at its discretion, declare a profit sharing contribution as a percentage of eligible wages based on the Company's worldwide operating results. The employer profit sharing and matching contribution expense under the Plan was \$0.4 million, \$3.0 million and \$5.9 million in the fiscal years ended December 31, 2009, 2008 and 2007, respectively.

**Supplemental Savings and Retirement Plan** The Company also maintains the Supplemental Savings and Retirement Plan (the "Supplemental Plan"). Under the Supplemental Plan, certain senior executives are allowed certain salary deferral benefits that would otherwise be lost by reason of restrictions imposed by the Internal Revenue Code limiting the amount of compensation which may be deferred under tax-qualified plans. Liabilities of \$1.6 million and \$2.2 million at December 31, 2009 and 2008, respectively, related to the Supplemental Plan are included in the consolidated balance sheets under the caption "Pension benefit obligations and other liabilities". The Company recorded expense of \$0.2 million in the year ended December 31, 2009, income of \$0.8 million in the year ended December 31, 2008 and expense of \$0.3 million in the year ended December 31, 2007 related to the Supplemental Plan.

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



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The tables below set forth the Company's estimated funded status as of December 31, 2009 and 2008:

<i>(In thousands)</i>	<u>2009</u>	<u>2008</u>
<b>Change in benefit obligation:</b>		
Benefit obligation at beginning of period	\$ 22,196	\$ 17,693
Plan amendments	124	—
Service cost	1,520	1,411
Interest cost	350	334
Actuarial losses (gains)	885	(63)
Benefits paid	(2,811)	(1,210)
Curtailments	(71)	—
Foreign exchange impact	(397)	4,031
Benefit obligation at end of period	<u>21,796</u>	<u>22,196</u>
<b>Change in plan assets:</b>		
Fair value of plan assets at beginning of period	4,687	4,442
Return on plan assets	346	(1,286)
Employer contributions	1,078	1,047
Benefits paid	(1,349)	(426)
Foreign exchange impact	(81)	910
Fair value of plan assets at end of period	<u>4,681</u>	<u>4,687</u>
<b>Funded status:</b>		
Plan assets less than benefit obligation	<u>(17,115)</u>	<u>(17,509)</u>
Net amount recognized	<u><u>\$(17,115)</u></u>	<u><u>\$(17,509)</u></u>
<b>Amounts recognized in the consolidated balance sheet consist of:</b>		
Noncurrent liability	\$(17,115)	\$(17,509)
Accumulated other comprehensive loss, net of taxes	2,313	1,961
<b>Amounts recognized in accumulated other comprehensive loss, net of tax consist of:</b>		
Net actuarial loss	\$ 2,572	\$ 1,990
Prior service cost	1,221	1,268
Unrecognized transition obligation	(13)	(14)
Gross amount recognized	3,780	3,244
Deferred income taxes	(1,467)	(1,283)
Net amount recognized	<u><u>\$ 2,313</u></u>	<u><u>\$ 1,961</u></u>

Information for pension plans with an accumulated benefit obligation in excess of plan assets:

<i>(In thousands)</i>	<u>2009</u>	<u>2008</u>
Projected benefit obligation	\$ 21,796	\$ 22,196
Accumulated benefit obligation	19,060	20,181
Fair value of plan assets	4,681	4,687

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The components of the net periodic benefit cost for the years ended December 31, 2009, 2008 and 2007 are as follows:

<i>(In thousands)</i>	2009	2008	2007
Pension benefits:			
Service cost	\$1,520	\$1,411	\$1,165
Interest cost	350	334	307
Expected return on plan assets	(72)	(74)	(30)
Amortization of prior service cost	153	134	10
Amortization of net transition obligation	(1)	(1)	(1)
Recognized actuarial net loss	222	66	114
Curtailements	(71)	—	—
Net periodic pension benefit cost	<u>\$2,101</u>	<u>\$1,870</u>	<u>\$1,565</u>

The estimated amount that will be amortized from accumulated other comprehensive income into net periodic benefit cost in 2010 is as follows:

<i>(In thousands)</i>	
Transition obligation	\$ (1)
Prior service cost	(71)
Net actuarial loss	(42)
	<u>\$(114)</u>

Assumptions used in determining the benefit obligation and net periodic benefit cost for the Company's pension plans for the years ended December 31, 2009, 2008 and 2007 are presented in the following table as weighted-averages:

	2009	2008	2007
Benefit obligations:			
Discount rate	1.40%	1.66%	1.78%
Rate of compensation increase	5.21%	6.56%	6.53%
Net periodic benefit cost:			
Discount rate	1.74%	1.77%	2.05%
Rate of compensation increase	6.38%	6.55%	2.26%
Expected return on plan assets	1.49%	1.58%	0.90%

The plans' expected return on assets as shown above is based on management's expectations of long-term average rates of return to be achieved by the underlying investment portfolios. In establishing this assumption, management considers historical and expected returns for the asset classes in which the plans are invested, as well as current economic and capital market conditions. The discount rate primarily used by the Company is based on the Japan Government Bond index compiled by the Japan Securities Dealers Association for long-term government bonds with terms equivalent to the weighted average remaining service period of the employees in the plan.

### Plan Assets

At December 31, 2009, the majority of the Company's pension plan assets are invested in a Japanese insurance company's investment funds which consist mainly of equity and debt securities. The remaining portion of the Company's plan assets is deposited in Bank of Taiwan in the form of cash, where Bank of Taiwan is the assigned funding vehicle for the statutory retirement benefit.

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The fair value measurements of the Company's pension plan assets at December 31, 2009, by asset category are as follows:

<i>(in thousands)</i> Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Japan Plan assets <sup>(a)</sup>	\$4,370	—	\$ 4,370	—
Taiwan Plan assets <sup>(b)</sup>	311	—	311	—
	\$4,681	—	\$ 4,681	—

- (a) The Company selects a pre-packaged portfolio pooled investment fund that is conservative. This fund includes investments that are both U.S. and non U.S. in nature in approximately 52% equities, 44% bonds, and 4% other investments to boost earnings in the medium and long terms while adopting a flexible hedging approach to reduce risk.
- (b) This category includes investments in the government of Taiwan's pension fund. The government of Taiwan is responsible for the strategy and allocation of the investment contributions.

### Cash Flows

The Company expects to contribute \$1.1 million to its defined benefit pension plans during 2010. The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

<i>(In thousands)</i>	
2010	\$ 800
2011	341
2012	516
2013	576
2014	331
Years 2015-2019	\$ 4,381

## (19) FAIR VALUE MEASUREMENTS

Effective January 1, 2008, the Company adopted ASC 820, *Fair Value Measurements and Disclosures*, ("ASC 820"), except for non-recurring financial assets and liabilities, and nonfinancial assets and liabilities, for which ASC 820 was adopted on January 1, 2009.

ASC 820 provides a framework for measuring fair value under generally accepted accounting principles. As defined in ASC 820, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The Company utilizes market data or assumptions that the Company believes market participants would use in pricing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique. These inputs can be readily observable, market-corroborated or generally unobservable.

ASC 820 establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The three levels of the fair value hierarchy defined by ASC 820 are as follows:

- Level 1— Quoted prices in active markets accessible at the reporting date for identical assets and liabilities.
- Level 2— Quoted prices for similar assets or liabilities in active markets. Quoted prices for identical or similar assets and liabilities in markets that are not considered active or financial instruments for which all significant inputs are observable, either directly or indirectly.
- Level 3— Prices or valuations that require inputs that are significant to the valuation and are unobservable.

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A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

Other than cash and cash equivalents, the Company had no assets and liabilities measured on a recurring basis at December 31, 2009.

In the fourth quarter 2009, the Company recorded an other-than-temporary impairment of \$1.0 million for an equity method investment. The fair value of the investment after impairment was zero at December 31, 2009 and is classified as a Level 3 investment in the fair value hierarchy.

The fair value measurements of the assets acquired and liabilities assumed in the acquisition of Pureline as described in Note 3 to the consolidated financial statements were generally based on valuations involving significant unobservable inputs, or Level 3 in the fair value hierarchy.

Effective January 1, 2008, the Company adopted certain aspects of ASC 825, *Financial Instruments*, ("ASC 825"), which provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments and written loan commitments not previously recorded at fair value. Upon the adoption of ASC 825, the Company did not elect to apply the fair value provisions to any of the items set forth in ASC 825.

### **(20) (LOSS) EARNINGS PER SHARE (EPS)**

Basic EPS is computed by dividing net (loss) income by the weighted average number of shares of common stock outstanding during each period. The following table presents a reconciliation of the share amounts used in the computation of basic and diluted earnings per share for the years ended December 31, 2009, 2008 and 2007:

<i>(In thousands)</i>	2009	2008	2007
Basic (loss) earnings per share—Weighted common shares outstanding	117,321	112,653	124,339
Weighted common shares assumed upon exercise of options and vesting of restricted stock units	—	—	1,919
Diluted (loss) earnings per share—Weighted common shares outstanding	117,321	112,653	126,258

Approximately 3.6 million of the Company's stock options were excluded from the calculation of diluted earnings per share in the fiscal year ended December 31, 2007 because the exercise prices of the stock options were greater than the average price of the Company's common stock, and therefore their inclusion would have been antidilutive. The effect of the inclusion of stock options and unvested restricted common stock for the years ended December 31, 2009 and 2008, respectively, would have been anti-dilutive.

Unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and shall be included in the computation of EPS pursuant to the two-class method under the requirements of paragraph ASC 260-10-45-60A. This provision of ASC was effective for the Company January 1, 2009 and the adoption of this provision affected the computation of basic and diluted shares outstanding for the year ended December 2007 as follows: Basic earnings per common share from continuing operations was reduced from \$0.38 to \$0.37 and diluted net income per common share was reduced from \$0.36 to \$0.35. The years ended December 31, 2009 and 2008, respectively, were not affected given the net loss for the periods.

### **(21) SEGMENT INFORMATION**

Effective January 1, 2009, the Company changed its financial segment reporting to reflect management and organizational changes made by the Company. Periods prior to 2009 have been restated to reflect the basis of segmentation presented below. The Company's three reportable operating segments are business divisions that

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provide unique products and services. Effective January 1, 2009, each operating segment is separately managed and has separate financial information evaluated regularly by the Company's chief operating decision maker in determining resource allocation and assessing performance.

The Company's financial reporting segments are Contamination Control Solutions (CCS), Microenvironments (ME), and Entegris Specialty Materials (ESM).

- *CCS*: provides a wide range of products and subsystems that purify, monitor and deliver critical liquids and gases used in the semiconductor manufacturing process.
- *ME*: provides products that protect wafers, reticles and electronic components at various stages of transport, processing and storage.
- *ESM*: provides specialized graphite components used in semiconductor equipment and offers low-temperature, plasma-enhanced chemical vapor deposition coatings of critical components of semiconductor manufacturing equipment used in various stages of the manufacturing process.

Summarized financial information for the Company's reportable segments is shown in the following table:

<u>(In thousands)</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Net sales			
CCS	\$ 241,163	\$ 330,810	\$ 382,182
ME	111,465	190,761	235,168
ESM	46,016	33,128	8,888
Total net sales	<u>\$ 398,644</u>	<u>\$ 554,699</u>	<u>\$ 626,238</u>

Intersegment sales are not significant.

<u>(In thousands)</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Segment profit			
CCS	\$ 30,846	\$ 77,024	\$ 109,725
ME	4,066	24,276	40,804
ESM	2,925	9,250	1,102
Total segment profit	<u>\$ 37,837</u>	<u>\$ 110,550</u>	<u>\$ 151,631</u>

<u>(In thousands)</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Total assets			
CCS	\$ 194,051	\$ 198,991	\$ 241,768
ME	84,782	92,452	108,360
ESM	120,377	134,998	45,714
Goodwill	—	—	402,125
Corporate	105,462	171,383	237,274
Total assets	<u>\$ 504,672</u>	<u>\$ 597,824</u>	<u>\$ 1,035,241</u>

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Corporate assets consist primarily of cash and cash equivalents, assets of discontinued operations, assets held for sale, investments,—deferred tax assets and deferred tax charges. Through December 31, 2008, the Company operated as one reportable segment; accordingly, the Company's goodwill was not attributed to the Company's segments.

<i>(In thousands)</i>	2009	2008	2007
Depreciation and amortization			
CCS	\$ 22,325	\$ 24,423	\$ 25,811
ME	10,093	10,453	12,045
ESM	11,929	6,442	1,294
Corporate	5,780	5,025	4,626
Total depreciation and amortization	<u>\$ 50,127</u>	<u>\$ 46,343</u>	<u>\$ 43,776</u>

<i>(In thousands)</i>	2009	2008	2007
Capital expenditures			
CCS	\$ 7,818	\$ 11,737	\$ 10,143
ME	3,406	8,545	10,572
ESM	459	1,570	806
Corporate	1,479	5,135	5,398
Total capital expenditures	<u>\$ 13,162</u>	<u>\$ 26,987</u>	<u>\$ 26,919</u>

Segment profit is defined as net sales less direct segment operating expenses, excluding certain unallocated expenses, consisting mainly of general and administrative costs for the Company's human resources, finance and information technology functions, amortization of intangible assets, impairment of goodwill, charges for the fair market value write-up of acquired inventory sold and restructuring charges and before interest expense, income taxes and equity in the earnings of affiliates. The following table reconciles total segment profit to operating income:

<i>(In thousands)</i>	2009	2008	2007
Total segment profit (loss)	\$ 37,837	\$ 110,550	\$ 151,631
Amortization of intangibles	(19,237)	(19,585)	(18,874)
Restructuring charges	(15,463)	(10,423)	—
Charge for fair value mark-up of acquired inventory sold	(4,553)	(13,519)	(836)
Impairment of goodwill	—	(473,799)	—
Unallocated general and administrative expenses	(47,512)	(73,133)	(88,203)
Operating (loss) income	<u>\$ (48,928)</u>	<u>\$ (479,909)</u>	<u>\$ 43,718</u>

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The following table presents amortization of intangibles, restructuring charges and charges for fair value mark-up of acquired inventory sold for each of the Company's segments for the years ended December 31, 2009, 2008 and 2007:

<i>(In thousands)</i>	2009	2008	2007
<b>Amortization of intangibles</b>			
CCS	\$ 13,201	\$ 15,327	\$ 16,926
ME	647	705	1,050
ESM	5,389	3,553	898
	<u>\$ 19,237</u>	<u>\$ 19,585</u>	<u>\$ 18,874</u>
<b>Restructuring charges</b>			
CCS	\$ 2,713	\$ 1,454	—
ME	7,375	3,528	—
ESM	299	—	—
Corporate	5,076	5,441	—
	<u>\$ 15,463</u>	<u>\$ 10,423</u>	<u>—</u>
<b>Charge for fair value mark-up of acquired inventory sold</b>			
CCS	\$ 488	\$ —	\$ —
ESM	4,065	13,519	836
	<u>\$ 4,553</u>	<u>\$ 13,519</u>	<u>\$ 836</u>

The following table summarizes the Company's total net sales by markets served for the years ended December 31, 2009, 2008 and 2007:

<i>(In thousands)</i>	2009	2008	2007
<b>Net sales:</b>			
Semiconductor	\$ 282,193	\$ 419,132	\$ 482,083
Data storage	11,958	24,526	37,334
Other	104,493	111,041	106,821
	<u>\$ 398,644</u>	<u>\$ 554,699</u>	<u>\$ 626,238</u>

The following tables summarize total net sales, based upon the country to which sales to external customers were made, and property, plant and equipment attributed to significant countries for the years ended December 31, 2009, 2008 and 2007:

<i>(In thousands)</i>	2009	2008	2007
<b>Net sales:</b>			
United States	\$ 114,009	\$ 153,098	\$ 163,146
Japan	74,214	115,589	144,231
Germany	13,331	21,264	30,508
Taiwan	64,907	72,792	89,012
Singapore	16,614	29,603	34,168
South Korea	30,960	40,954	51,477
Malaysia	7,101	14,750	21,230
China	19,332	21,868	18,504
Other	58,176	84,781	73,962
	<u>\$ 398,644</u>	<u>\$ 554,699</u>	<u>\$ 626,238</u>

<i>(In thousands)</i>	2009	2008	2007
<b>Property, plant and equipment:</b>			
United States	\$ 69,652	\$ 94,175	\$ 63,774
Japan	27,817	30,891	22,481
Malaysia	26,204	26,247	27,270
Other	11,758	8,425	7,632
	<u>\$ 135,431</u>	<u>\$ 159,738</u>	<u>\$ 121,157</u>

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In the years ended December 31, 2009, 2008 and 2007, no single nonaffiliated customer accounted for 10% or more of net sales. In the years ended December 31, 2009, 2008 and 2007, net sales to the Company's top ten customers accounted for approximately 29%, 26% and 28%, respectively, of the Company's net sales.

### **(22) COMMITMENTS AND CONTINGENT LIABILITIES**

The Company is subject to various claims, legal actions, and complaints arising in the ordinary course of business. The Company believes the final outcome of these matters will not have a material adverse effect on its consolidated financial position or results of operations. The Company expenses legal costs as incurred. The following discussion provides information regarding certain litigation to which the Company was a party that were pending as of December 31, 2009.

As previously disclosed, on March 3, 2003 the Company's predecessor, Mykrolis Corporation, filed a lawsuit against Pall Corporation in the United States District Court for the District of Massachusetts alleging infringement of two of the Company's U.S. patents by certain fluid separation systems and related assemblies used in photolithography applications manufactured and sold by the defendant. The Company's lawsuit sought a preliminary injunction preventing the defendant from the manufacture, use, sale, offer for sale or importation into the U.S. of any infringing product as well as damages. On April 30, 2004, the Court issued a preliminary injunction against Pall Corporation and ordered Pall to immediately stop making, using, selling, or offering to sell within the U.S., or importing into the U.S., its PhotoKleen EZD-2 Filter Assembly products or "any colorable imitation" of those products. On January 18, 2005, the Court issued an order holding Pall Corporation in contempt of court for the violation of the preliminary injunction and ordering Pall to disgorge all profits earned from the sale of its PhotoKleen EZD-2 Filter Assembly products and colorable imitations thereof from the date the preliminary injunction was issued through January 12, 2005. In addition, Pall was also ordered to reimburse Mykrolis for certain of its attorney's fees associated with the contempt and related proceedings. The Court's order also dissolved the preliminary injunction, effective January 12, 2005, based on certain prior art cited by Pall which it alleged raised questions as to the validity of the patents in suit. On February 17, 2005, the Company filed notice of appeal to the U.S. Circuit Court of Appeals for the Federal Circuit appealing the portion of the Court's order that dissolved the preliminary injunction and Pall filed a notice of appeal to that court with respect to the finding of contempt and the award of attorneys' fees. On June 13, 2007 the Court of Appeals issued an opinion dismissing Pall's appeal for lack of jurisdiction and affirming the District Court's order dissolving the preliminary injunction.

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

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



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

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

### (23) SUBSEQUENT EVENTS

Subsequent events have been evaluated up to and including February 25, 2010, which is the date these financial statements were issued.

### (24) QUARTERLY INFORMATION-UNAUDITED

<i>(In thousands, except per share data)</i>	Fiscal quarter ended			
	March 28, 2009	June 27, 2009	September 26, 2009	December 31, 2009
Net sales	\$ 59,038	\$ 82,576	\$ 110,706	\$ 146,324
Gross profit	5,018	23,730	44,777	64,287
Net (loss) income attributable to Entegris, Inc.	(37,745)	(22,492)	(7,608)	10,124
Basic (loss) income per share attributable to Entegris, Inc. Net (loss) income	(0.34)	(0.20)	(0.07)	0.08
Diluted loss per share attributable to Entegris, Inc. Net (loss) income	(0.34)	(0.20)	(0.07)	0.08

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

**ENTEGRIS, INC.**  
2009 RSU Unit Award Agreement

In consideration of services rendered by Employee to Entegris, Inc. (the "Company") the undersigned Employee: (i) acknowledges that Employee has received an equity incentive award (the "Award") under the Entegris, Inc. 1999 Long-Term Incentive and Stock Option Plan (the "Plan"), consisting of restricted stock units with respect to the Company's Common Stock \$0.01 par value ("Stock") subject to the terms set forth under Article I below; (ii) further acknowledges receipt of a copy of the Plan as in effect on the effective date hereof; and (iii) agrees with the Company that the Award is subject to the terms of the Plan and to the following terms and conditions:

**ARTICLE I – RSU AWARD**

- 1.1. Effective Date. This Agreement shall take effect as of February \_\_\_\_\_, 2009 which is the date of grant of the Award.
- 1.2. Restricted Stock Units Subject to Award. The Award consists of \_\_\_\_\_ restricted stock units (the "RSU") with respect to the Stock. Each RSU is equivalent to one share of the Stock. The undersigned's rights to the RSU are subject to the restrictions described in this Agreement and in the Plan (which is incorporated herein by reference with the same effect as if set forth herein in full) in addition to such other restrictions, if any, as may be imposed by law.
- 1.3. Meaning of Certain Terms. The term "vest" as used herein with respect to any RSU means the lapsing of the restrictions described herein with respect to such RSU.
- 1.4. Nontransferability of RSUs. The RSU acquired by the undersigned pursuant to this Agreement shall not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of except as provided below and in the Plan.
- 1.5. Forfeiture Risk. If the undersigned ceases to be employed by the Company and/or its subsidiaries for any reason any then outstanding and unvested RSU acquired by the undersigned hereunder shall be automatically and immediately forfeited. The undersigned hereby: (i) appoints the Company as the attorney-in-fact of the undersigned to take such actions as may be necessary or appropriate to effectuate the cancellation of a forfeited RSU.
- 1.6. Vesting of RSUs. The RSU acquired hereunder shall vest in accordance with the provisions of this Article I, Section 1.6 and applicable provisions of the Plan, as follows:
- 25% of the RSUs vest on and after February 19, 2010;
  - an additional 25% of the RSUs vest on and after February 19, 2011;
  - an additional 25% of the RSUs vest on and after February 19, 2012; and
  - the final 25% of the RSUs vest on and after February 19, 2013.

Notwithstanding the foregoing, no RSU shall vest on any vesting date specified above unless: **(A)** the undersigned is then, and since the date of award has continuously been, employed by the Company or its subsidiaries; and **(B)** the undersigned has fulfilled the obligations specified in Section 1.9 below. Upon vesting each RSU shall entitle Employee to receive one share of Stock.

- 1.7. No Dividends, etc.. The undersigned shall NOT be entitled: **(i)** to receive any dividends or other distributions paid with respect to the Stock to which the RSU relates, or **(ii)** to vote any Stock with respect to which the RSU relates.
- 1.8. Sale of Vested Shares. The undersigned understands that Employee will be free to sell any Stock with respect to which the RSU relates once the RSU has vested, subject to **(i)** satisfaction of any applicable tax withholding requirements with respect to the vesting of such RSU; **(ii)** the completion of any administrative steps (for example, but without limitation, the transfer of certificates) that the Company may reasonably impose; and **(iii)** applicable requirements of federal and state securities laws.
- 1.9. Certain Tax Matters. The undersigned expressly acknowledges that the award or vesting of the RSU acquired hereunder, may give rise to “wages” subject to withholding. The undersigned expressly acknowledges and agrees that Employee’s rights hereunder are subject to Employee promptly paying to the Company in cash (or by such other means as may be acceptable to the Company in its discretion, including, if the Administrator so determines, by the delivery of previously acquired Stock or shares of Stock acquired hereunder in accordance with the Plan or by the withholding of amounts from any payment hereunder) all taxes required to be withheld in connection with such award, vesting or payment.

## ARTICLE II – GENERAL PROVISIONS

- 2.1. Definitions. Except as otherwise expressly provided, all terms used herein shall have the same meaning as in the Plan. The term “Administrator” means the Management Development & Compensation Committee of the Company’s Board of Directors.
- 2.2. Mergers, etc. In the event of any of (i) a consolidation or merger in which the Company is not the surviving corporation or which results in the acquisition of all or substantially all of the Company’s then outstanding common stock by a single person or entity or by a group of persons and/or entities acting in concert, (ii) a sale or transfer of all or substantially all the Company’s assets, or (iii) a dissolution or liquidation of the Company (a “Covered Transaction”), all outstanding Awards pursuant to Article 1 above shall vest and if relevant become exercisable and all deferrals, other than deferrals of amounts that are neither measured by reference to nor payable in shares of Stock, shall be accelerated, immediately prior to the Covered Transaction and upon consummation of such Covered Transaction all Awards then outstanding and requiring exercise shall be forfeited unless assumed by an acquiring or surviving entity or its affiliate as provided in the following sentence. In the event of a Covered Transaction, unless otherwise determined by the Administrator, all Awards that are payable in shares of Stock and that have not been exercised, exchanged or converted, as applicable, shall be converted into and represent the right to receive the consideration to be paid in such Covered Transaction for each share of Stock into which such Award is exercisable, exchangeable or convertible, less the applicable exercise price or purchase price for such Award. In connection with any Covered Transaction in which there is an acquiring or surviving entity, the Administrator may provide for substitute or replacement Awards from, or the assumption of Awards by, the acquiring or surviving entity or its affiliates, any such substitution, replacement or assumption to be on such terms as the Administrator determines, provided that no such replacement or substitution shall diminish in any way the acceleration of Awards provided for in this section.
- 2.3. Retirement, etc. If Employee ceases to be an employee due to retirement with the consent of the Administrator, Employee will be entitled to immediate Vesting of all unvested RSUs awarded pursuant to this Agreement. As used herein the term “retirement with the consent of the Administrator” means that Employee’s retirement must be with the consent of the

Administrator, which consent may be granted or withheld in the discretion of the Administrator. In the event that Employee ceases to be an employee under circumstances that would otherwise qualify for retirement but the consent of the Administrator has not been granted, then Employee shall not be entitled to the benefits of this Section 2.3.

- 2.4. No Understandings as to Employment. The undersigned Employee further expressly acknowledges that nothing in the Plan or any modification thereto, in the Award or in this Agreement shall constitute or be evidence of any understanding, express or implied, on the part of the Company to employ the Employee for any period or with respect to the terms of the undersigned's employment or to give rise to any right to remain in the service of the Company or of any subsidiary or affiliate of the Company, and the undersigned shall remain subject to discharge to the same extent as if the Plan had never been adopted or the Award had never been made.
- 2.5. Savings Clause. In the event that Employee is employed in a jurisdiction where the performance of any term or provision of this Agreement by the Company: **(i)** will result in a breach or violation of any statute, law, ordinance, regulation, rule, judgment, decree, order or statement of public policy of any court or governmental agency, board, bureau, body, department or authority, or **(ii)** will result in the creation or imposition of any penalty, charge, restriction, or material adverse effect upon the Company, then any such term or provision shall be null, void and of no effect.
- 2.6. Amendment. This Agreement may be amended only by an instrument in writing executed and delivered by the Employee and the Company.

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(Signature of Employee)

Dated: \_\_\_\_\_, 200\_\_

The foregoing Agreement is hereby accepted:

**Entegris, Inc.**

By \_\_\_\_\_

Title \_\_\_\_\_

**ENTEGRIS, INC.**  
2009 Stock Option Award Agreement

In consideration of services rendered by Employee to Entegris, Inc. (the "Company") the undersigned Employee: (i) acknowledges that Employee has received an equity incentive award (the "Award") under the Entegris, Inc. 1999 Long-Term Incentive and Stock Option Plan (the "Plan"), consisting of a stock option grant subject to the terms and conditions specified in Article I below. The Employee further agrees with the Company that the Award is also subject to the terms and conditions set forth in Article II below:

**ARTICLE I – STOCK OPTION GRANT**

- 1.1.** Option Grant. Effective February \_\_\_\_\_, 2009 (the "Grant Date") the Company hereby grants Employee a non-qualified option to purchase \_\_\_\_\_ shares of Stock ("Option"). The Option is not intended to be an incentive stock option under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code") and will be interpreted accordingly.
- 1.2.** Option Exercise Price. The exercise price of the Option shall be 100% of the closing price of the Stock on the NASDAQ stock market on the Grant Date (\$0.00 per share).
- 1.3.** Option Vesting Schedule. This Option shall vest and become exercisable, except as hereinafter provided, in whole or in part, at any time and from time to time as follows:
- 1/3 on and after February 19, 2010;
  - an additional 1/3 on and after February 19, 2011; and
  - the final 1/3 on and after February 19, 2012.
- In the event that any of the above vesting dates falls on a day that the Company is not open for business, then vesting of the applicable portion shall occur on the next succeeding day that the Company is open for business.
- 1.4.** Expiration of Option. To the extent that the Option shall not have been exercised, this Option shall expire at 5:00 p.m. local time at the Company's headquarters on February 19, 2016 and no part of the Option may be exercised thereafter. If an expiration, termination or forfeiture date described herein falls on a weekday, Employee must exercise Employee's Option before 5:00 p.m. local time at the Company's headquarters on that date. If an expiration, termination or forfeiture date described herein falls on a weekend or any other day on which the NASDAQ stock market is not open, Employee must exercise the Options before 5:00 p.m. local time at the Company's headquarters on the last NASDAQ business day prior to the expiration, termination or forfeiture date.
- 1.5.** Exercise of Option. When and as vested, this Option may be exercised up to the number of shares of Stock specified in Section 1.1 above only by serving written notice on the designated stock plan administrator. Payment of the Option exercise price specified in Section 1.2 above may be made by: **(a)** payment in cash; **(b)** arrangement with the Company's stock plan administrator which is acceptable to the Company where payment of the Option exercise price is made pursuant to an irrevocable direction to the broker to deliver all or part of the proceeds from the sale of the shares of the Stock issueable under the Option to the Company; **(c)** exchange of previously owned shares of Stock, valued at fair market value on the day of exercise as provided in the Plan; **(d)** delivery of

any other lawful consideration approved in advance by the Administrator specified in the Plan or its delegate, or (e) any combination of the foregoing. Fractional shares may not be exercised. Employee will have the rights of a stockholder only after the shares of Stock have been issued to Employee in accordance with this Agreement.

- 1.6. No Assignment of Option. This Option may not be assigned or transferred except as may otherwise be provided by the terms of this Agreement.
- 1.7. Basic Adjustments for Changes in Capital Structure. The Administrator shall make adjustments from time to time in the number of shares of Stock covered by the Option as specified in Section 1.1 above in such reasonable manner as the Administrator may determine to reflect any increase or decrease in the number of issued shares of Stock of the Company resulting from a subdivision or consolidation of shares or any other capital adjustment, the payment of stock dividends or other increases or decreases in such Stock effected without receipt of consideration by the Company.
- 1.8. Termination of Employment with the Company. All exercisable Options granted herein must be exercised within ninety (90) days following the date on which the employment of Employee with the Company or one of its subsidiaries terminates (i.e., last day worked, excluding any severance period) (“Termination Date”), or be forfeited, except as provided in Section 2.3 below and as follows:
- (a) In the event of Employee’s death during employment, each Option granted hereunder will be exercisable, whether or not vested on the date of Employee’s death, until the earlier of: (1) the first anniversary of Employee’s date of death; or (2) the original expiration date of the option. In the event of Employee’s death during a Special Exercise Period as specified in Section 2.3 below, each Option will continue to be exercisable in accordance with the provisions of that Section.
  - (b) In the event of the termination of employment of Employee due to Disablement, Employee may exercise the Option, to the extent not previously exercised and whether or not the option had vested on or prior to the date of employment termination, at any time prior to 365 days following the later of the date of Employee’s termination of employment due to Employee’s Disablement or the date of determination of Employee’s Disablement, *provided, however*, that while the claim of Disablement is pending, Options that were unvested at termination of employment may not be exercised and Options that were vested at termination of employment may be exercised only during the period set forth in the introductory clause to this Section 1.8. The Option shall terminate on the 365th day from the date of determination of Disablement, to the extent that it is unexercised. For these purposes “Disablement” shall be determined in accordance with the standards and procedures of the then-current Long Term Disability policies maintained by the Company, which is generally a physical condition arising from an illness or injury, which renders an individual incapable of performing work in any occupation, as determined by the Company.
  - (c) If Employee’s employment is terminated for “Cause”, all granted but unexercised stock Options shall be forfeited on Employee’s Termination Date.
- 1.9. Suspension of Option Exercises. For administrative or other reasons, the Company may, from time to time, suspend the ability of employees to exercise options for limited periods of time. Notwithstanding the above, the Company shall not be obligated to deliver any shares of Stock during any period when the Company determines that the exerciseability of the Option or the delivery of shares hereunder would violate any federal, state or other applicable laws.

- 1.10. Withholding of Income Taxes. Nonqualified stock options are taxable upon exercise. To the extent required by applicable federal, state or other law, Employee shall make arrangements satisfactory to the Company for the satisfaction of any withholding tax obligations that arise by reason of an Option exercise and, if applicable, any sale of shares of the Stock. The Company shall not be required to issue shares of the Stock or to recognize any purported transfer of shares of the Stock until such obligations are satisfied. The Administrator designated in the Plan may permit these obligations to be satisfied by having the Company withhold a portion of the shares of the Stock that otherwise would be issued to Employee upon exercise of the Option, or to the extent permitted by the Administrator, by tendering shares of the Stock previously acquired.

## ARTICLE II – GENERAL PROVISIONS

- 2.1. Definitions. Except as otherwise expressly provided, all terms used herein shall have the same meaning as in the Plan. The term “Administrator” means the Management Development & Compensation Committee of the Company’s Board of Directors.
- 2.2. Mergers, etc. In the event of any of (i) a consolidation or merger in which the Company is not the surviving corporation or which results in the acquisition of all or substantially all of the Company’s then outstanding common stock by a single person or entity or by a group of persons and/or entities acting in concert, (ii) a sale or transfer of all or substantially all the Company’s assets, or (iii) a dissolution or liquidation of the Company (a “Covered Transaction”), the vesting of all Options under each outstanding Award pursuant to Article I above will be accelerated and such shares will become fully exercisable prior to the Covered Transaction on a basis that gives the undersigned a reasonable opportunity, as determined by the Administrator, following delivery of the shares, to participate as a stockholder in the Covered Transaction. In connection with any Covered Transaction in which there is an acquiring or surviving entity, the Administrator may provide for substitute or replacement Awards from, or the assumption of Awards by, the acquiring or surviving entity or its affiliates, any such substitution, replacement or assumption to be on such terms as the Administrator determines, provided that no such replacement or substitution shall diminish in any way the acceleration of Options provided for in this section.
- 2.3. Retirement, etc. If Employee ceases to be an employee due to retirement with the consent of the Administrator, Employee will be entitled to a special exercise period with respect to the Option (the “Special Exercise Period”) which will begin on Employee’s Retirement Date and will end on the earlier of the 3rd anniversary of Employee’s Retirement Date or February 19, 2016. During the Special Exercise Period, the Option will continue to vest in accordance with the schedule specified in Section 1.3 above and will be exercisable to the same extent that it would have been exercisable had Employee remained employed by the Company or one of its subsidiaries. As used herein the term “retirement with the consent of the Administrator” means that Employee’s retirement must be with the consent of the Administrator, which consent may be granted or withheld in the discretion of the Administrator. In the event that Employee ceases to be an employee under circumstances that would otherwise qualify for retirement but the consent of the Administrator has not been granted, then Employee shall not be entitled to the benefits of this Section 2.3.
- 2.4. No Understandings as to Employment. The undersigned Employee further expressly acknowledges that nothing in the Plan or any modification thereto, in the Award or in this Agreement shall constitute or be evidence of any understanding, express or implied, on the part of the Company to employ the Employee for any period or with respect to the terms of the undersigned’s employment or to give rise to any right to remain in the service of the Company or of any subsidiary or affiliate of the Company, and the undersigned shall remain subject to discharge to the same extent as if the Plan had never been adopted or the Award had never been made.

- 2.5. Acts of Misconduct. If Employee has allegedly committed an act of serious misconduct, including, but not limited to, embezzlement, fraud, dishonesty, unauthorized disclosure of trade secrets or confidential information, breach of fiduciary duty or nonpayment of an obligation owed to the Company, an Executive Officer of the Company may suspend Employee's rights under the Award, including the vesting of Restricted Stock and Options and the exercise of vested Options, pending a decision by the Administrator or an Executive Officer to terminate the Award. No rights under the Award may be exercised during such suspension or after such termination.
- 2.6. Disputes. The Administrator designated in the Plan or its delegate shall finally and conclusively determine any disagreement concerning the Award.
- 2.7. Savings Clause. In the event that Employee is employed in a jurisdiction where the performance of any term or provision of this Agreement by the Company: **(i)** will result in a breach or violation of any statute, law, ordinance, regulation, rule, judgment, decree, order or statement of public policy of any court or governmental agency, board, bureau, body, department or authority, or **(ii)** will result in the creation or imposition of any penalty, charge, restriction, or material adverse effect upon the Company, then any such term or provision shall be null, void and of no effect.
- 2.8. Amendment. This Agreement may be amended only by an instrument in writing executed and delivered by the Employee and the Company.

Dated: \_\_\_\_\_, 2009

\_\_\_\_\_  
(Signature of Employee)

The foregoing Agreement is hereby accepted:

**Entegris, Inc.**

By \_\_\_\_\_  
Title



**FIRST AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

WHEREAS, Entegris, Inc. (the "Principal Sponsor") has heretofore established and maintains a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN, (2005 Restatement)" (the "Plan Statement"); and

WHEREAS, The Principal Sponsor has reserved to itself the power to make further amendments of the Plan Statement.

NOW, THEREFORE, The Plan Statement is hereby amended as follows:

**1. LOAN ROLLOVERS. Effective for Vested Total Accounts distributed on or after January 1, 2006, Section 7.5.4 of the Plan Statement is hereby amended to read in full as follows:**

7.5.4. **Distribution in Cash.** Except as provided in Appendix F, distribution of a Participant's Vested Total Account shall be made in cash. If, however, the Vested Total Account:

- (a) consists in whole or in part of a Participant's unpaid promissory note and the distributee elects distribution in kind pursuant to a direct rollover to another tax-qualified plan, or
- (b) is in whole or in part invested in an individual Subfund under Section 4.1.2 and the distributee elects distribution in kind (to the extent the investment provides for in-kind distributions),

the Trustee shall cause distribution of that portion of the Vested Total Account to be made in kind.

**2. LOAN ROLLOVERS. Effective for Vested Total Accounts distributed on or after January 1, 2006, Section 7.5.4 of the Plan Statement is hereby amended to read in full as follows:**

- (h) **Event of Default.** Subject to subsection (i) below, nonpayment within ten (10) days after the due date shall be an event of default, unless the loan's promissory note is distributed in kind in connection with Section 7.5.4. If a payment is not made by payroll deduction, then payment shall be considered made for this purpose only when the personal check, cashier's check, certified check or money order is received in fact by the Trustee or the Committee as agent for the Trustee. Upon the occurrence of an event of

default, the Participant's Vested Accounts in the Plan given as security shall be offset by the amount of the then outstanding balance of the loan in default (including, to the extent required under the Code, interest on the amount in default from the time of the default until the time of the offset). In the case of a Participant who has not had an Event of Maturity, however, this offset shall be deferred until an Event of Maturity as to such Participant, but, in the interim, it shall not be possible to cure the default. Such offset shall be automatic. No notice shall be required prior to offset.

**3. SAVINGS CLAUSE. Save and except as hereinabove expressly amended, the Plan Statement shall continue in full force and effect.**

**SECOND AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

WHEREAS, Entegris, Inc. (the "Principal Sponsor") has heretofore established and maintains a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN, (2005 Restatement)," as amended (collectively, the "Plan Statement"); and

WHEREAS, The Principal Sponsor has reserved to itself the power to make further amendments of the Plan Statement.

NOW, THEREFORE, The Plan Statement is hereby amended as follows:

**1. ELIGIBILITY SERVICE FOR MYKROLIS EMPLOYEES. Effective August 6, 2005, Schedule I to the Plan Statement is hereby amended and replaced by the Schedule I attached hereto.**

SAVINGS CLAUSE. Save and except as hereinabove expressly amended, the Plan Statement shall continue in full force and effect.

**SCHEDULE I**

**CREDITING OF PRIOR SERVICE**

As of August 6, 2005

All Hours of Service with the following entities and their predecessors prior to the time such entities became Affiliates of the Principal Sponsor shall be credited for Eligibility Service and Vesting Service purposes under this Plan in accordance with the rules under this Plan as if such Hours of Service had been credited with the Principal Sponsor.

1. Aeronex Incorporated
2. Extraction Systems, Inc.
3. Millipore Corporation
4. Mykrolis Corporation. Notwithstanding any provision in Section 2.2 to the contrary, each employee who is actively employed by Mykrolis Corporation as of August 6, 2005, shall become a Participant as of the first payroll period coincident with or next following August 6, 2005, with respect to discretionary profit sharing contributions made pursuant to Section 3.4 if such employee is then in Recognized Employment.

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**THIRD AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

WHEREAS, Entegris, Inc. (the "Principal Sponsor") has heretofore established and maintains a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended by two amendments (collectively, the "Plan Statement"); and

WHEREAS, The Principal Sponsor has reserved to itself the power to make further amendments of the Plan Statement.

NOW, THEREFORE, The Plan Statement is hereby amended as follows:

**1. MATCHING CONTRIBUTIONS. Effective for Plan Years beginning on or after January 1, 2006, the last sentence of Section 3.3.1 of the Plan Statement shall be amended to read in full as follows:**

Such Employer matching contributions made with respect to any elective contributions made during any quarter of the Plan Year shall be delivered to the Trustee for deposit in the Fund no later than the last day of the immediately following quarter of the Plan Year.

**2. HARDSHIP DISTRIBUTIONS. Effective for all hardship distributions made on or after January 1, 2006, Section 7.2.2(a) of the Plan Statement shall be amended to read in full as follows:**

- (a) **Purposes.** Hardship distributions shall be allowed under Section 7.2.2 only if the Participant establishes that the hardship distribution is to be made for one of the following purposes:
- (i) expenses for (or necessary to obtain) medical care for the Participant, the Participant's spouse or any dependents of the Participant (as defined in section 152 of the Code and without regard to sections 152(b)(1), 152(b)(2) and 152(d)(1)(B) of the Code) that would be deductible under section 213 of the Code (determined without regard to whether the expenses exceed seven and one-half percent (7.5%) of adjusted gross income),
  - (ii) costs directly related to the purchase of a principal residence for the Participant (excluding mortgage payments),

- (iii) payment of tuition, room and board and related educational fees for the next twelve (12) months of post-secondary education for the Participant or the Participant's spouse, children or dependents (as defined in section 152 of the Code and without regard to sections 152(b)(1), 152(b)(2) and 152(d)(1)(B) of the Code),
- (iv) payments necessary to prevent the eviction of the Participant from the Participant's principal residence or foreclosure on the mortgage of that principal residence,
- (v) payments for burial or funeral expenses of the Participant's deceased parent, spouse, children or dependents (as defined in section 152 of the Code and without regard to section 152(d)(1)(B) of the Code), or
- (vi) expenses for the repair of damage to the Participant's principal residence that would qualify for the casualty deduction under section 165 of the Code (determined without regard to whether the loss exceeds ten percent (10%) of adjusted gross income).

Such purposes shall be considered to be an immediate and heavy financial need of the Participant.

**3. HARDSHIP DISTRIBUTIONS. Effective for all hardship distributions made on or after January 1, 2006, the second to the last sentence of Section 7.2.2(b) of the Plan Statement shall be amended to read in full as follows:**

In addition, a hardship distribution which includes a portion of the Participant's Retirement Savings Account shall not be allowed unless the Participant has obtained all distributions, including distribution of ESOP dividends under section 404(k) of the Code but not including other hardship distributions, and all nontaxable loans (at the time of the loan) currently available under all plans maintained by the Employer and Affiliates.

**4. APPENDIX D. Effective for Plan Years beginning on or after January 1, 2006, Appendix to the Plan Statement shall be amended by substituting therefore the Appendix D attached to this amendment.**

**5. SAVINGS CLAUSE. Save and except as hereinabove expressly amended, the Plan Statement shall continue in full force and effect.**

APPENDIX D

401(k), 401(m) & 402(g) COMPLIANCE

**Introduction.** This Appendix D contains rules for complying with the nondiscrimination provisions of sections 401(k) and 401(m) of the Code and the limitations imposed under section 402(g) of the Code.

SECTION 1

SECTION 402(g) COMPLIANCE

1.1. **Excess Deferrals.**

1.1.1. **In General.** A Participant may attribute to this Plan any excess deferrals made during a taxable year of the Participant by notifying the Committee in writing not later than the March 1 following such taxable year of the amount of the excess deferral to be assigned to the Plan. A Participant shall be deemed to have notified the Plan of excess deferrals to the extent the Participant has excess deferrals for the taxable year calculated by taking into account only the amount of elective contributions allocated to the Participant's Retirement Savings Account and to any other plan of the Employer and Affiliates. Notwithstanding any other provision of the Plan Statement, a Participant's excess deferrals, plus any income and minus any loss allocable thereto, shall be distributed to the Participant no later than the first April 15 following the close of the Participant's taxable year. If a Participant is eligible to make catch-up contributions pursuant to Section 2 of the Plan Statement but such Participant does not make the catch-up contributions or does not make the maximum allowable catch-up contributions for such taxable year, then the Participant's excess deferrals shall first be re-characterized as catch-up contributions, to the extent permitted under section 414(v) of the Code, and any remaining excess deferrals, plus any income and minus any loss allocable thereto, shall be distributed to the Participant no later than the first April 15 following the close of the Participant's taxable year.

1.1.2. **Definitions.** For purposes of this Appendix, excess deferrals shall mean the amount of elective contributions allocated to the Participant's Retirement Savings Account for a Participant's taxable year and which the Participant or the Employer, where applicable, allocates to this Plan pursuant to the claim procedure described below.

1.1.3. **Claims.** The Participant's claim shall be in writing; shall be submitted to the Committee not later than March 1 with respect to the immediately preceding taxable year; shall specify the amount of the Participant's excess deferrals for the preceding taxable year; and shall be accompanied by the Participant's written statement that if such amounts are not distributed, such excess deferrals, when added to amounts deferred under other plans or arrangements described in sections 401(k), 402A, 408(k), 408(p), 457, 501(c)(18) or 403(b) of the Code, will exceed the limit

imposed on the Participant by section 402(g) of the Code for the taxable year in which the deferral occurred. The Employer shall notify the Plan on behalf of the Participant where the excess deferrals occur in the Plan or the combined plans of the Employer and Affiliates.

1.1.4. **Determination of Income or Loss.** The excess deferrals shall be adjusted for income or loss. Unless the Committee and the recordkeeper for the Plan agree otherwise in writing, the income or loss allocable to excess deferrals shall be equal to the sum of:

- (a) **Income or Loss for the Plan Year.** The income or loss allocable to excess deferrals for the Plan Year shall be determined by multiplying the income or loss allocable to the Participant's elective contributions for the Plan Year ending within such preceding taxable year by a fraction, the numerator of which is the excess deferrals on behalf of the Participant for such preceding taxable year and the denominator of which is the Participant's Retirement Savings Account balance attributable to elective contributions on the Valuation Date coincident with or immediately before the last day of such preceding taxable year.
- (b) **Income or Loss for the Gap Period.** The excess deferrals shall also be adjusted for income or loss for the period between the Valuation Date coincident with or immediately before the last day of such preceding taxable year and the date of distribution (the "gap period"). The income or loss allocable to the excess deferrals for the gap period shall be equal to ten percent (10%) of the income or loss allocable to the distributable excess deferrals for the applicable taxable year (as determined in (a) above) multiplied by the number of whole calendar months that have elapsed since the end of such taxable year including the month of distribution if distribution occurs after the fifteenth (15th) of such month.

1.1.5. **Accounting for Excess Deferrals.** Excess deferrals shall be distributed from the Participant's Retirement Savings Account.

1.1.6. **Orphaned Matching Contributions.** If excess deferrals are distributed pursuant to this Section 1.1, applicable matching contributions under Section 3.3 of the Plan Statement shall be treated as forfeitures and reallocated as provided in Section 6.2 of the Plan Statement.



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**SECTION 2**

**SECTION 401(k) COMPLIANCE**

This Plan satisfies the nondiscrimination requirements of section 401(k) of the Code using the alternative method set forth in section 401(k)(12) of the Code.

**SECTION 3**

**SECTION 401(m) COMPLIANCE**

This Plan satisfies the nondiscrimination requirements of section 401(m) of the Code using the alternative method set forth in section 401(m)(11) of the Code.

**SUGGESTED RESOLUTIONS  
FOR MEETING OF  
BOARD OF DIRECTORS  
OF  
ENTEGRIS, INC.**

WHEREAS, Entegris, Inc. ("Entegris") has established and maintains a 401(k) and profit sharing plan which, in its most recent amended and restated form, is embodied in a document dated August 5, 2005 and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)" and as amended by two amendments (collectively referred to as the "Plan Statement"); and

WHEREAS, Entegris wishes to amend the Plan Statement to bring the Plan Statement into compliance with the final 401(k) and 401(m) regulations which are effective for plan years beginning on or after January 1, 2006;

NOW, THEREFORE, BE IT RESOLVED, That the document entitled "THIRD AMENDMENT OF ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)" is hereby approved and adopted effective as of the dates stated therein.

RESOLVED FURTHER, That the officers of this corporation are authorized and directed to take all actions necessary or desirable to carry said document into full force and effect and to cause said document to be presented, together with such supporting data as may be necessary, to any agency or agencies of the government for ruling as to whether the same complies with the pertinent provisions of the Internal Revenue Code and, in particular, sections 401(a) and 401(k) thereof, and other applicable provisions of law with authority to make any changes thereof which may be necessary or desirable, in their opinion, in order to obtain a favorable ruling from said agency or agencies.

**FOURTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

WHEREAS, Entegris, Inc. (the "Principal Sponsor") has heretofore established and maintains a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended by three amendments (collectively, the "Plan Statement"); and

WHEREAS, The Principal Sponsor has reserved to itself the power to make further amendments of the Plan Statement.

NOW, THEREFORE, The Plan Statement is hereby amended as follows:

**ADDITION OF ROTH CONTRIBUTIONS. Effective so that Participants may make Roth contributions from pay received on or after January 1, 2008, Section 1.1.1 shall be amended to read in full as follows:**

1.1.1. **Accounts** — the following Accounts will be maintained under the Plan for Participants:

- (a) **Total Account** — for convenience of reference, a Participant's entire interest in the Fund, including the Participant's Retirement Savings Account, Roth Account, Employer Matching Account, Employer Profit Sharing Account, Pension Account, ESOP Account, Rollover Account, and Transfer Account.
- (b) **Retirement Savings Account** — the Account maintained for each Participant to which are credited the Employer contributions made in consideration of such Participant's elective contributions pursuant to Section 3.2, together with any increase or decrease thereon.
- (c) **Roth Account** — the Account maintained for each Participant to which are credited the Participant's after-tax Roth elective contributions made pursuant to Section 2.4, together with any increase or decrease thereon. Distribution of a Participant's Roth Account shall be made in accordance with section 402A of the Code and the regulations issued thereunder.
- (d) **Employer Matching Account** — the Account maintained for each Participant to which is credited the Participant's allocable share of the Employer contributions made pursuant to Section 3.3, together with any increase or decrease thereon.

- (e) **Employer Profit Sharing Account** — the Account maintained for each Participant to which is credited the Participant's allocable share of the Employer contributions made pursuant to Section 3.4, together with any increase or decrease thereon.
- (f) **Pension Account** — the Account maintained for each Participant to which is credited the Participant's interest, if any, transferred from the Entegris, Inc. Pension Plan, together with any increase or decrease thereon. A Participant's Pension Account will be distributed in accordance with Appendix E to the Plan Statement.
- (g) **ESOP Account** — the Account maintained for each Participant to which is credited the Participant's interest, if any, transferred from the Entegris, Inc. Employee Stock Ownership Plan, together with any increase or decrease thereon. Distributions from a Participant's ESOP Account shall be made in accordance with Section 7 and Appendix F to the Plan Statement.
- (h) **Rollover Account** — the Account maintained for each Participant to which are credited the Participant's rollover contributions made pursuant to Section 3.7, together with any increase or decrease thereon.
- (i) **Transfer Account** — the Account maintained for each Participant to which is credited the Participant's interest, if any, transferred from another qualified plan by the trustee of such other plan pursuant to an agreement made under Section 9.3 and not credited to any other Account pursuant to such agreement (or another provision of this Plan Statement), together with any increase or decrease thereon.

**RECOGNITION OF SURMET SERVICE. Effective for calculating Hours of Service on or after August 16, 2007, Section 1.1.18 of the Plan Statement shall be amended to read in full as follows:**

1.1.18. **Hour of Service (for Vesting Service)** — each hour for which the employee is paid, or entitled to payment, for the performance of duties for the Employer or an Affiliate and each hour for which back pay, irrespective of mitigation of damages, has been either awarded or agreed to by the Employer or an Affiliate. These hours shall be credited to the employee for the period or periods in which the duties are performed. In addition, all hours of service with Surmet Corporation (and its predecessors) shall be credited for purposes of determining Hours of Service (for Vesting Service) under this Plan as if such Hours of Service had been with Entegris, Inc.

**RECOGNITION OF SURMET SERVICE.** Effective for calculating Hours of Service on or after August 16, 2007, Section 1.1.19 of the Plan Statement shall be amended by adding the following new subsection (g) thereto.

- (g) **Service with Surmet Corporation.** All Hours of Service with Surmet Corporation (and its predecessors) shall be credited for purposes of determining hours of service (for Eligibility) under this Plan as if such Hours of Service had been with Entegris, Inc.

**ADDITION OF ROTH CONTRIBUTIONS.** Effective so that Participants may make Roth contributions from pay received on or after January 1, 2008, Section 2.4 shall be amended to read in full as follows:

**2.4. Retirement Savings Election.**

2.4.1. **Amount.** Subject to the following rules, the Retirement Savings Election of each Participant shall provide for elective contributions through a reduction equal to not less than one percent (1%) nor more than thirty-five percent (35%) of the amount of Recognized Compensation which otherwise would be paid to the Participant by the Employer each payday. Such elective contributions, under the Plan and any other plan of the Employer and Affiliates for that Participant's taxable year shall not exceed the dollar limit in effect for that taxable year under section 402(g) of the Code (as adjusted under the Code and by the Secretary of the Treasury for cost-of-living increases). The Committee may, from time to time under rules, change the minimum and maximum allowable elective contributions. The reductions in earnings for elective contributions elected by the Participant shall be made by the Employer from the Participant's remuneration each payday on and after the Enrollment Date for so long as the Retirement Savings Election remains in effect. The Committee shall specify the method (including telephonic, electronic or similar methods) of providing or modifying a Retirement Savings Election and all procedures for providing and accepting Retirement Savings Elections and notices, including requirements for advance notice.

2.4.2. **Pre-Tax and After-Tax Roth Election.** For taxable years beginning on or after January 1, 2008, each Participant may elect to designate all or a portion of the Participant's elective contributions for the Participant's taxable year as after-tax Roth contributions. Any elective contributions that are not designated as Roth contributions shall be deemed to be pre-tax elective contributions. Any elective contributions designated as Roth contributions shall be includible in the Participant's gross income at the time deferred and shall be allocated to the Participant's Roth Account. Any elective contributions designated as pre-tax elective contributions shall not be includible in the Participant's gross income at the time deferred and shall be allocated to the Participant's Retirement Savings Account. Elective contributions contributed to the Plan as one type, either Roth contributions or pre-tax elective contributions, may not later be reclassified as the other type.

**ADDITION OF ROTH CONTRIBUTIONS. Effective so that Participants may make Roth contributions from pay received on or after January 1, 2008, Section 2.6.2(a) and (b) shall be amended to read in full as follows:**

- (a) Each Participant may elect to designate all or a portion of the Participant's catch-up elective contributions for the Participant's taxable year as after-tax Roth contributions. Any catch-up elective contributions that are not designated as Roth contributions shall be deemed to be pre-tax elective contributions. Any catch-up elective contributions designated as Roth contributions shall be includible in the Participant's gross income at the time deferred and shall be allocated to the Participant's Roth Account. Any catch-up elective contributions designated as pre-tax elective contributions shall not be includible in the Participant's gross income at the time deferred and shall be allocated to the Participant's Retirement Savings Account.
- (b) Catch up elective contributions shall be deducted and accounted for separately from other elective contributions.

**ADDITION OF NON-SPOUSE BENEFICIARY ROLLOVERS. Effective for distributions made on or after January 1, 2008, the first paragraph of Section 7.5.2 of the Plan Statement shall be amended to read in full as follows:**

7.5.2. **Direct Rollover.** A distributee who is eligible to elect a direct rollover may elect, at the time and in the manner prescribed by the Committee, to have all or any portion of an eligible rollover distribution paid directly to an eligible retirement plan specified by the distributee in a direct rollover. A distributee who is eligible to elect a direct rollover includes a Participant, a Beneficiary, and a Participant's spouse or former spouse who is the Alternate Payee under a qualified domestic relations order, as defined in Appendix C.

**ADDITION OF NON-SPOUSE BENEFICIARY ROLLOVERS. Effective for distributions made on or after January 1, 2008, Section 7.5.2(b) of the Plan Statement shall be amended to read in full as follows:**

- (b) **Eligible retirement plan** means (i) an individual retirement account described in section 408(a) of the Code, or (ii) an individual retirement annuity described in section 408(b) of the Code, or (iii) a plan described in section 403(a) or section 403(b) of the Code, or (iv) a qualified trust described in section 401(a) of the Code that accepts the eligible rollover distribution, or (v) eligible plan under section 457(b) of the Code which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state and which agrees to separately account for amounts transferred into such plan from this Plan. The definition of eligible retirement plan shall also apply in the case of a distribution to a Beneficiary who is the surviving spouse of a

Participant or to a spouse or former spouse who is an Alternate Payee. In the case of a Beneficiary who is not the surviving spouse of a Participant or an Alternate Payee, the definition of eligible retirement plan shall include only an individual retirement account or annuity described in sections 408(a) or (b) of the Code, which is treated as an inherited individual retirement account or annuity within the meaning of Code section 408(d)(3)(C).

**SAVINGS CLAUSE. Save and except as herein expressly amended, the Plan Statement shall continue in full force and effect.**

**FIFTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

WHEREAS, Entegris, Inc. (the "Principal Sponsor") has heretofore established and maintains a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended (collectively, the "Plan Statement"); and

WHEREAS, The Principal Sponsor has reserved to itself the power to make further amendments of the Plan Statement.

NOW, THEREFORE, The Plan Statement is hereby amended as follows:

**1. EGTRRA-TOP HEAVY PROVISIONS. Effective for Plan Years beginning on or after January 1, 2002, Section 1.10(b) of Appendix B to the Plan Statement shall be amended to read in full as follows:**

- (b) For the purpose of determining the present value of the cumulative accrued benefit for any employee under a defined benefit plan, or the amount of the account of any employee under a defined contribution plan, such present value or amount shall be increased by the aggregate distributions made with respect to such employee under the plan on account of severance from employment, death or disability during the one (1) year period ending on the determination date and the aggregate distributions made with respect to such employee under the plan for any other reason during the five (5) year period ending on the determination date.

**2. SAVINGS CLAUSE. Save and except as herein expressly amended, the Plan Statement shall continue in full force and effect.**



**SIXTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

WHEREAS, Entegris, Inc. (the "Principal Sponsor") has heretofore established and maintains a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended by five amendments (collectively, the "Plan Statement"); and

WHEREAS, The Principal Sponsor has reserved to itself the power to make further amendments of the Plan Statement.

NOW, THEREFORE, The Plan Statement is hereby amended as follows:

**1. ACCOUNT CHANGE. Effective as of January 1, 2008, Section 1.1.1 of the Plan Statement shall be amended to read in full as follows:**

1.1.1. **Accounts** — the following Accounts will be maintained under the Plan for Participants:

- (a) **Total Account** — for convenience of reference, a Participant's entire interest in the Fund, including the Participant's Retirement Savings Account, Roth Account, Employer Matching Account, Employer Profit Sharing Account, Pension Account, ESOP Account, Rollover Account, Roth Rollover Account and After-Tax Account.
- (b) **Retirement Savings Account** — the Account maintained for each Participant to which are credited the Employer contributions made in consideration of such Participant's elective contributions pursuant to Section 3.2, together with any increase or decrease thereon.
- (c) **Roth Account** — the Account maintained for each Participant to which are credited the Participant's after-tax Roth elective contributions made pursuant to Section 2.4, together with any increase or decrease thereon. Distribution of a Participant's Roth Account shall be made in accordance with section 402A of the Code and the regulations issued thereunder.
- (d) **Employer Matching Account** — the Account maintained for each Participant to which is credited the Participant's allocable share of the Employer contributions made pursuant to Section 3.3 and the Participant's

interest, if any, in employer matching contributions transferred from any plan that was merged into the Plan, together with any increase or decrease thereon.

- (e) **Employer Profit Sharing Account** — the Account maintained for each Participant to which is credited the Participant's allocable share of the Employer contributions made pursuant to Section 3.4 and the Participant's interest, if any, in profit sharing contributions transferred from any plan that was merged into the Plan, together with any increase or decrease thereon.
- (f) **Pension Account** — the Account maintained for each Participant to which is credited the Participant's interest, if any, transferred from the Entegris, Inc. Pension Plan, together with any increase or decrease thereon. A Participant's Pension Account will be distributed in accordance with Appendix E to the Plan Statement.
- (g) **ESOP Account** — the Account maintained for each Participant to which is credited the Participant's interest, if any, transferred from the Entegris, Inc. Employee Stock Ownership Plan, together with any increase or decrease thereon. Distributions from a Participant's ESOP Account shall be made in accordance with Section 7 and Appendix F to the Plan Statement.
- (h) **Rollover Account** — the Account maintained for each Participant to which are credited the Participant's rollover contributions made pursuant to Section 3.7, together with any increase or decrease thereon.
- (i) **Roth Rollover Account** — the Account maintained for each Participant to which are credited the Participant's rollover contributions of after-tax Roth amounts made pursuant to Section 3.7, together with any increase or decrease thereon.
- (j) **After-Tax Account** — the Account maintained for each Participant to which were credited the Participant's nondeductible after-tax contributions (other than Roth contributions), together with any increase or decrease thereon.

**2. CHANGE TO RECOGNIZED EMPLOYMENT DEFINITION. Effective as of January 1, 2008, Section 1.1.33 of the Plan Statement shall be amended to read in full as follows:**

1.1.33. **Recognized Employment** — all service with the Employer by persons classified by the Employer as common law employees, excluding, however, service classified by the Employer as:

- (a) employment in a unit of employees whose terms and conditions of employment are subject to a collective bargaining agreement between the Employer and a union representing that unit of employees, unless (and to the extent) such collective bargaining agreement provides for the inclusion of those employees in the Plan,

- (b) employment of a nonresident alien who is not receiving any earned income from the Employer which constitutes income from sources within the United States,
- (c) employment in a division or facility of the Employer which is not in existence on January 1, 2000 (that is, was acquired, established, founded or produced by the liquidation or similar discontinuation of a separate subsidiary after January 1, 2000) unless and until the Committee shall declare such employment to be Recognized Employment,
- (d) services of a person who is not a common law employee of the Employer including, without limiting the generality of the foregoing, services of a Leased Employee, leased owner, leased manager, shared employee, shared Leased Employee, temporary worker, independent contractor, contract worker, agency worker, freelance worker or other similar classification,
- (e) employment of a Highly Compensated Employee to the extent agreed to in writing by the employee, and
- (f) employment as a temporary employee.

Employment of a United States citizen or a United States resident alien outside the United States shall be classified as Recognized Employment. The Employer's classification of a person at the time of inclusion or exclusion in Recognized Employment shall be conclusive for the purpose of the foregoing rules. No reclassification of a person's status with the Employer, for any reason, without regard to whether it is initiated by a court, governmental agency or otherwise and without regard to whether or not the Employer agrees to such reclassification, shall result in the person being included in Recognized Employment, either retroactively or prospectively. Notwithstanding anything to the contrary in this provision, however, the Committee may declare that a reclassified person will be included in Recognized Employment, either retroactively or prospectively. Any uncertainty concerning a person's classification shall be resolved by excluding the person from Recognized Employment.

**3. CHANGE OF TRUSTEE. Effective as of January 2, 2008, Section 1.1.38 of the Plan Statement shall be amended to read in full as follows:**

1.1.38. **Trust Agreement** — the separate document entitled "Trust Agreement between Entegris, Inc. and Fidelity Management Trust Company—Entegris, Inc. 401(k) Savings and Profit Sharing Plan" entered into by and between the Principal Sponsor and the Trustee effective as of January 2, 2008, as may be amended from time to time.

**4. INCREASE IN DEFERRAL LIMIT. Effective for distributions made on or after January 1, 2008, Section 2.4.1 of the Plan Statement shall be amended to read in full as follows:**

2.4.1. **Amount.** Subject to the following rules, the Retirement Savings Election of each Participant shall provide for elective contributions through a reduction equal to not less than one percent (1%) nor more than seventy percent (70%) of the amount of Recognized Compensation which otherwise would be paid to the Participant by the Employer each payday. Such elective contributions, under the Plan and any other plan of the Employer and Affiliates for that Participant's taxable year shall not exceed the dollar limit in effect for that taxable year under section 402(g) of the Code (as adjusted under the Code and by the Secretary of the Treasury for cost-of-living increases). The Committee may, from time to time under rules, change the minimum and maximum allowable elective contributions. The reductions in earnings for elective contributions elected by the Participant shall be made by the Employer from the Participant's remuneration each payday on and after the Enrollment Date for so long as the Retirement Savings Election remains in effect. The Committee shall specify the method (including telephonic, electronic or similar methods) of providing or modifying a Retirement Savings Election and all procedures for providing and accepting Retirement Savings Elections and notices, including requirements for advance notice.

**5. AUTOMATIC CATCH-UP ELECTION. Effective for deferral elections made on or after January 1, 2008, Section 2.6.1 of the Plan Statement shall be amended to read in full as follows:**

2.6.1. **Enrollment.** A Participant who both:

- (a) has attained age fifty (50) years or will attain the age fifty (50) years during the Plan Year, and
- (b) has reached the dollar limitation on elective contributions in section 402(g)(1) of the Code (the "402(g) limit") before the last day of that calendar year,

will automatically be enrolled to make catch-up contributions unless the Participant elects not to make catch-up contributions.

**6. AUTOMATIC CATCH-UP ELECTION. Effective for deferral elections made on or after January 1, 2008, Section 2.6.2 of the Plan Statement shall be amended to read in full as follows:**

2.6.2. **Remittance.** Catch-up contributions shall be deducted by the Employer from the Participant's Recognized Compensation.

- (a) Each Participant may elect to designate all or a portion of the Participant's catch-up elective contributions for the Participant's taxable year as after-tax Roth contributions. Any catch-up elective contributions that are not designated as Roth contributions shall be deemed to be pre-tax elective contributions. Any catch-up elective contributions designated as Roth contributions shall be includible in the Participant's gross income at the time deferred and shall be allocated to the Participant's Roth Account. Any catch-up elective contributions designated as pre-tax elective contributions shall not be includible in the Participant's gross income at the time deferred and shall be allocated to the Participant's Retirement Savings Account.
- (b) Catch up elective contributions shall be deducted and accounted for separately from other elective contributions.

**7. AUTOMATIC CATCH-UP ELECTION. Effective for deferral elections made on or after January 1, 2008, Section 2.6.5 of the Plan Statement shall be amended to read in full as follows:**

2.6.5. **Reverse Re-characterization (Regular to Catch-Up).** To the extent that (i) a Participant is eligible to make catch-up elective contributions as provided under Section 2.6.1, (ii) the Participant has excess elective deferrals (either in excess of the annual contribution limit under section 402(g) of the Code, in excess of the limit in Section 2.4, or in excess of the average deferral percentage test specified in section 401(k) of the Code and Appendix D of this Plan Statement), and (iii) the Participant has not exceeded the applicable annual contribution limit specified in section 414(v) of the Code, any amount initially characterized as elective contributions (and not as catch-up elective contributions) shall be re-characterized as catch-up elective contributions to the extent permitted under section 414(v) of the Code. Any amounts re-characterized shall be treated as catch-up elective contributions (and not elective contributions) for all purposes of the Plan.

**8. ADDITION OF ROTH 401(k) ROLLOVERS. Effective for rollover contributions made into the Plan on or after January 1, 2008, Section 3.7.2 of the Plan Statement shall be amended to read in full as follows:**

3.7.2. **Eligible Contributions.** Each employee in Recognized Employment may contribute to the Plan, in such form and manner as may be prescribed by the Committee in accordance with those provisions of federal law relating to rollover contributions, cash (or the cash proceeds from distributed property) received by the employee in Recognized Employment in an eligible rollover distribution. The permitted sources for an eligible rollover distribution include: (i) an eligible retirement plan that is a tax-qualified retirement plan under section 401(a), (ii) a plan described in sections 403(a) or 403(b) of the Code, (iii) an eligible plan under section 457(b) of the Code which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state, and (iv) an

individual retirement account or annuity described in sections 408(a) or 408(b) of the Code. Although a source may be included on the foregoing list, the Committee may refuse to accept an eligible rollover distribution from a particular plan or individual retirement account or annuity. Such rollover contributions may include Roth 401(k) contributions made to another tax-qualified retirement plan. The Committee may establish other rules and conditions regarding the acceptance of direct rollovers under section 401(a)(31) of the Code from trustees or custodians of other qualified pension, profit sharing or stock bonus plans.

**9. ADDITION OF ROTH 401(k) ROLLOVERS. Effective for rollover contributions made into the Plan on or after January 1, 2008, Section 3.7.4 of the Plan Statement shall be amended to read in full as follows:**

3.7.4. **Allocation.** The rollover contribution made by an employee in Recognized Employment to the Plan shall be allocated to the Participant's Rollover Account. Notwithstanding the foregoing, to the extent that such rollover contribution includes Roth 401(k) contributions made to another tax-qualified retirement plan, those amounts shall be allocated to the Participant's Roth Rollover Account. For the purposes of Section 4, contributions allocated to the Participant's Rollover Account and Roth Rollover Account shall be credited as soon as practicable after they are received by the Trustee.

**10. ACCOUNT CHANGE. Effective as of January 1, 2008, Section 5.2 of the Plan Statement shall be amended to read in full as follows:**

5.2. **Other Accounts.** Each Participant's Retirement Savings Account, Roth Account, Employer Matching Account, ESOP Account, Rollover Account, Roth Rollover Account and After-Tax Account shall be fully (100%) vested at all times.

**11. AGE 59-1/2 DISTRIBUTIONS. Effective for distributions made on or after January 1, 2008, Section 7.2.1(b) of the Plan Statement shall be amended to read in full as follows:**

(b) **Accounting for Age 59-1/2 Distributions.** In the application, the Participant shall specify the extent to which the age 59-1/2 distribution is to be made from the Roth Account. Except to the extent the Participant has specified that the age 59-1/2 distribution is to be made from the Participant's Roth Account, any such distribution shall be taken pro rata from the following Accounts of the Participant:

- Rollover Account
- Employer Matching Account
- Employer Profit Sharing Account
- Retirement Savings Account.

**12. HARDSHIP DISTRIBUTIONS. Effective for distributions made on or after January 1, 2008, Section 7.2.2 of the Plan Statement shall be amended to read in full as follows:**

**7.2.2. Hardship Distributions.** A Participant may receive a hardship distribution from the Accounts listed in (e) below if the Committee determines that such hardship distribution is for one of the purposes described in (a) below and the conditions in (b) and (d) below have been fulfilled. To receive such a distribution, the Participant must apply to the Committee. In the application, the Participant shall specify the dollar amount to be distributed. Such hardship distribution shall be approved by the Committee and such hardship distribution shall be made in a lump sum cash payment as soon as administratively practicable following the approval of the application by the Committee.

- (a) **Purposes.** Hardship distributions shall be allowed under Section 7.2.2 only if the Participant establishes that the hardship distribution is to be made for one of the following purposes:
- (i) expenses for (or necessary to obtain) medical care for the Participant, the Participant's spouse or any dependents of the Participant (as defined in section 152 of the Code and without regard to sections 152(b)(1), 152(b)(2) and 152(d)(1)(B) of the Code) that would be deductible under section 213 of the Code (determined without regard to whether the expenses exceed seven and one-half percent (7.5%) of adjusted gross income),
  - (ii) costs directly related to the purchase of a principal residence for the Participant (excluding mortgage payments),
  - (iii) payment of tuition, room and board and related educational fees for the next twelve (12) months of post-secondary education for the Participant or the Participant's spouse, children or dependents (as defined in section 152 of the Code and without regard to sections 152(b)(1), 152(b)(2) and 152(d)(1)(B) of the Code),
  - (iv) payments necessary to prevent the eviction of the Participant from the Participant's principal residence or foreclosure on the mortgage of that principal residence,
  - (v) payments for burial or funeral expenses of the Participant's deceased parent, spouse, children or dependents (as defined in section 152 of the Code and without regard to section 152(d)(1)(B) of the Code), or
  - (vi) expenses for the repair of damage to the Participant's principal residence that would qualify for the casualty deduction under section 165 of the Code (determined without regard to whether the loss exceeds ten percent (10%) of adjusted gross income).

Such purposes shall be considered to be an immediate and heavy financial need of the Participant.

- (b) **Limitations.** In no event shall the cumulative amount of hardship distributions withdrawn exceed the amount of contributions to a Participant's Retirement Savings Account or Roth Account made pursuant to Section 3.2 (i.e., hardship distributions shall not include any earnings on such contributions or any qualified nonelective contributions (as defined under section 401(m)(4)(C)) or earnings on such qualified nonelective contributions). The amount of the hardship distribution shall not exceed the amount of the Participant's immediate and heavy financial need; provided, however, that the amount of the immediate and heavy financial need may include amounts necessary to pay any federal, state, or local income taxes or penalties reasonably anticipated to result from the distribution. In addition, a hardship distribution from the Participant's Retirement Savings Account or Roth Account shall not be allowed unless the Participant has obtained all distributions, including distribution of ESOP dividends under section 404(k) of the Code but not including other hardship distributions, and all nontaxable loans (at the time of the loan) currently available under all plans maintained by the Employer and Affiliates. Other funds are not currently available unless the funds are available prior to or coincidentally with the date the hardship distribution is available.
- (c) **Spousal Consent Not Required.** Spousal consent shall not be required to make a hardship distribution to a married Participant.
- (d) **Coordination with Other Plans.** The Participant's Retirement Savings Election and elective contributions and employee contributions under all other plans maintained by the Employer and Affiliates shall be canceled for six (6) months after receipt of a hardship distribution. Following the completion of that six (6) month period the Participant's Retirement Savings Election shall be automatically reinstated, provided the Participant is in Recognized Employment on that date. For the purposes of this Section 7.2.2(d), all other plans maintained by the Employer and Affiliates shall mean all qualified and nonqualified plans of deferred compensation maintained by the Employer and Affiliates (including stock option, stock purchase or similar plans).



- (e) **Sequence of Accounts.** Each hardship distribution made pursuant to this Section 7.2.2 shall first be taken from and charged to the Participant's Accounts in the following sequence:

Retirement Savings Account  
Roth Account.

- (f) **Coordination with Section 4.1.** If the hardship distribution is made from a Retirement Savings Account or a Roth Account which is invested in more than one (1) Subfund authorized and established under Section 4.1, the amount withdrawn shall be charged to each Subfund in the same proportions as the Retirement Savings Account or Roth Account is invested in each Subfund.

**13. ADDITION OF IN-SERVICE WITHDRAWAL. Effective for distributions made on or after January 1, 2008, the Plan Statement shall be amended to add a new Section 7.2.3, which shall read in full as follows:**

7.2.3. **General In-Service Withdrawals.** A Participant who is an employee may receive an in-service withdrawal from time to time from the Accounts listed in Section 7.2.3(b). To receive such a distribution, the Participant must apply to the Committee. In the application, the Participant shall specify the dollar amount to be distributed. Such distribution shall be approved by the Committee and such distribution shall be made in a lump sum cash payment as soon as administratively practicable following the approval of the application by the Committee.

- (a) **Limitations.** The following rules and limitations shall apply to in-service withdrawals. No in-service withdrawal shall be made from any portion of a Participant's Total Account that is invested in a self-managed brokerage Subfund authorized and established under Section 4.1. No in-service withdrawal shall be made from any portion of a Participant's Total Account that consists of the unpaid balance of any outstanding loans of the Participant under Section 7.
- (b) **Accounting for In-Service Distributions.** In the application, the Participant shall specify the extent to which the in-service distribution is to be made from the Participant's After-Tax Account. Except to the extent the Participant has specified that the in-service distribution is to be made from the Participant's After-Tax Account, any such distribution shall first be taken from and charged to the Participant's Accounts in the following sequence:

Rollover Account  
Roth Rollover Account.

Any general in-service distribution shall be deemed to have been taken from a combination of (i) the Participant's after-tax contributions to the After-Tax Account, to the extent of the aggregate amount thereof not previously withdrawn, and (ii) the earnings in the After-Tax Account and all contributions and all earnings in all other Accounts. The portion of each such in-service withdrawal that is deemed to be earnings will be in the same ratio as the earnings in the After-Tax Account and all contributions and all earnings in all other Accounts bear to the Total Account.

- (c) **Investment in More Than One Subfund.** If an in-service withdrawal is made from an Account which is invested in more than one (1) Subfund, the amount withdrawn shall be charged to each Subfund in the same proportions as the Account (minus any portion of the Account invested in a self-managed brokerage Subfund) is invested in each Subfund.

**14. REMOVAL OF QDRO RULES. Effective for domestic relations orders first received on or after January 1, 2008, the second sentence of Section 7.5.2 shall read in full as follows:**

A distributee who is eligible to elect a direct rollover includes a Participant, a Beneficiary, and a Participant's spouse or former spouse who is the Alternate Payee under a qualified domestic relations order.

**15. ADDITION OF IN-KIND ROLLOVERS. Effective for distributions made on or after January 1, 2008, Section 7.5.4 shall be amended to read in full as follows:**

7.5.4. **Distribution in Cash.** Except as provided in Appendix F, distribution of a Participant's Vested Total Account shall be made in cash. If, however, the Vested Total Account:

- (a) consists in whole or in part of a Participant's unpaid promissory note and the distributee elects distribution in kind pursuant to a direct rollover to another tax-qualified plan, or
- (b) is in whole or in part invested in investments for which the distributee elects distribution in kind pursuant to a direct rollover to another tax-qualified plan (to the extent that no administrative issues prevent such request from being accommodated), or
- (c) is in whole or in part invested in an individual Subfund under Section 4.1.2 and the distributee elects distribution in kind (to the extent the investment provides for in-kind distributions), the Trustee shall cause distribution of that portion of the Vested Total Account to be made in kind.

**16. REVISED LOAN PROCEDURES. Effective for loans made on or after January 1, 2008, Section 7.6.1 of the Plan Statement shall be amended to read in full as follows:**

7.6.1. **Availability.** Loans shall be made available to all Participants who are either actively employed by the Employer or an Affiliate or on an authorized leave of absence as determined by the Committee, subject to limitations and conditions established under this Section on a reasonably equivalent basis and shall not be made available to Highly Compensated Employees in an amount (expressed as a percentage of the Vested Total Account) greater than is made available to other employees.

**17. REVISED LOAN PROCEDURES. Effective for loans made on or after January 1, 2008, Section 7.6.6(b) of the Plan Statement shall be amended to read in full as follows:**

- (b) **Interest Rate.** The interest rate on any loan shall be equal to the prime rate (the base rate on corporate loans at large United States money center commercial banks) as reported by the Federal Reserve on the first business day of the calendar month in which the loan is granted plus one percent (1%).

**18. REVISED LOAN PROCEDURES. Effective for loans made on or after January 1, 2008, Section 7.6.6(h) of the Plan Statement shall be amended to read in full as follows:**

- (h) **Event of Default.** Subject to subsection (i) below, nonpayment within thirty (30) days after a payment due date and the existence of a principal balance outstanding as of the term of the loan sixty (60) days after the due date shall be an event of default, unless the loan's promissory note is distributed in kind in connection with Section 7.5.4. If a payment is not made by payroll deduction, then payment shall be considered made for this purpose only when the personal check, cashier's check, certified check or money order is received in fact by the Trustee or the Committee as agent for the Trustee. Upon the occurrence of an event of default, the Participant's Vested Accounts in the Plan given as security shall be offset by the amount of the then outstanding balance of the loan in default at the end of the calendar quarter following the calendar quarter in which loan payment was discontinued (including, to the extent required under the Code, interest on the amount in default from the time of the default until the time of the offset). In the case of a Participant who has not had an Event of Maturity, however, this offset shall be deferred until an Event of Maturity as to such Participant, but, in the interim, it shall not be possible to cure the default. Such offset shall be automatic. No notice shall be required prior to offset.

**19. REVISED LOAN PROCEDURES. Effective for loans made on or after January 1, 2008, Section 7.6.6(i) of the Plan Statement shall be amended to read in full as follows:**

- (i) **Suspension of Payments During Leave of Absence.** If the Participant is on an authorized leave of absence as determined by the Committee, and the Participant's wages during the leave are less than the amount of the loan payment, then loan payments shall be suspended for a period of up to one (1) year; provided, however, that the Participant's death even while payments are suspended shall nevertheless terminate the loan as provided in subsection (g). As soon as administratively practicable following the Participant's return to active employment with the Employer or an Affiliate, the Participant's loan shall be reamortized so that the unpaid balance of the Participant's loan will continue to be paid in equal periodic installments each payroll period in amounts sufficient to retire the entire loan indebtedness (principal and interest) by the original maturity date of the loan. Notwithstanding the foregoing, special rules apply to Participants on leaves of absence covered by the Uniformed Services Employment and Reemployment Rights Act of 1994.

**20. REMOVAL OF QDRO RULES. Effective for domestic relations orders first received on or after January 1, 2008, Appendix C shall be deleted in its entirety without replacement.**

**21. ADDITION OF REQUIRED 75% QJ&SA. Effective for distributions made on or after January 1, 2008, Section 1.2 of Appendix E of the Plan Statement shall be amended to read in full as follows:**

**1.2. QJ&SA Contract.** A QJ&SA contract is an immediate annuity contract issued as an individual policy or under a master or group contract which provides for a monthly annuity payable to and for the lifetime of the Participant beginning as of the date as of which it is purchased with a survivor annuity payable monthly after the death of the Participant to and for the lifetime of the surviving spouse of the Participant (to whom the Participant was married on the date as of which the first payment is due) in an amount equal to fifty percent (50%) (unless the Participant elects an alternative seventy-five percent (75%)) of the amount payable during the joint lives of the Participant and the surviving spouse. The seventy-five percent (75%) QJ&SA contract shall be equal to the value of the fifty percent (50%) QJ&SA contract. The contract shall be a QJ&SA contract only if it is issued on a premium basis which does not discriminate on the basis of the sex of the Participant or the surviving spouse.

**22. SAVINGS CLAUSE. Save and except as herein expressly amended, the Plan Statement shall continue in full force and effect.**

**SEVENTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

WHEREAS, Entegris, Inc., a Delaware corporation (“Entegris”), is the successor in interest by merger to Entegris, Inc., a Minnesota corporation (“Entegris Minnesota”);

WHEREAS, Entegris Minnesota had established and maintained and was the Principal Sponsor of a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled “ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement),” as amended (collectively, the “Plan”); and

WHEREAS, Entegris has, by merger, succeeded to the rights obligations and privileges under the Plan of Entegris Minnesota and the Board of Directors of Entegris, by action taken on August 10, 2005, has assumed all of the rights obligations and privileges of the Principal Sponsor of the Plan, including, without limitation, the power to make further amendments to the Plan.

NOW, THEREFORE, The Plan is hereby amended as follows:

**1. DEFINITION OF EMPLOYER SECURITIES. Effective August 1, 2005, Section 1.1 of the Plan shall be amended by adding thereto the following new Section 1.1.12 and all subsequent Sections (and cross references thereto) shall be renumbered accordingly:**

1.1.12. **Employer Securities** — common stock of Entegris Minnesota or of any successor corporation by merger or otherwise or of any other corporation which is an affiliate and a member of a controlled group of corporations, including Entegris, within the meaning of section 407(d)(7) of ERISA, and which is readily tradable on an established securities market.

**2. EMPLOYER SECURITIES. Effective August 1, 2005, Section 4.3.1 of the Plan shall be amended to read in full as follows:**

4.3.1. **Entegris Stock Subfund.** In addition to the Subfunds created pursuant to Section 4.1, the Trustee shall also maintain at least one Subfund which shall be invested in Employer Securities and which shall be known as the Entegris Stock Subfund. The initial balance of the Entegris Stock Subfund shall consist of Employer Securities (and such cash, if any) transferred from the Employee Stock Ownership Plan sponsored by Entegris Minnesota to an ESOP Account under this Plan on or about August 1, 2005. No portion of a Participant’s or Beneficiary’s Account other than the ESOP Account may be invested in the Entegris Stock Subfund. The primary purpose of the Entegris Stock Subfund is to benefit Participants and Beneficiaries by retaining for them, individually and collectively, a position of equity ownership in the Principal Sponsor and not by producing retirement income or investment gains. The Trustee shall not be permitted to borrow or use the proceeds of any exempt loan (as defined in section 54.4975-7 of the Treasury Regulations) for the purpose of acquiring Employer Securities to be held in the Entegris Stock Subfund.

3. **EMPLOYER SECURITIES.** Effective August 1, 2005, Sections 4.1.5(d), 4.3 and 12.10 of the Plan and Section 3 of Appendix F to the Plan shall be amended by replacing all references to “Employer securities” with “Employer Securities.”

4. **SAVINGS CLAUSE.** Save and except as herein expressly amended, the Plan shall continue in full force and effect.

**EIGHTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

Entegris, Inc., a Delaware corporation, has heretofore established and maintains a profit sharing plan (the "Plan") which, in most recent amended and restated form, is embodied in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended (collectively, the "Plan Statement"). The Plan Statement is hereby further amended in the following respects:

**1. ELIGIBILITY RULE FOR POCO EMPLOYEES. Effective August 11, 2008, Section 2.1 of the Plan Statement shall be amended by adding a new Section 2.1.1 to read in full as follows:**

2.1.1. **Special Rule for Poco Graphite, Inc. Employees.** Notwithstanding the provisions of Section 2.1, employees of Poco Graphite, Inc. who were employed by Poco Graphite, Inc. as of August 11, 2008 shall become Participants as soon as administratively possible following August 11, 2008.

**2. PARTIAL DISTRIBUTIONS VESTING FORMULA CHANGE. Effective for all distributions on or after January 1, 2008, Section 5.1.4 of the Plan Statement shall be amended to read in full as follows:**

5.1.4. **Special Rule for Partial Distributions.** For any employee who had completed one Hour of Service (for Vesting Service) prior to January 1, 2008, the following rule shall apply:

If a distribution is made of less than the entire Employer Profit Sharing Account or Pension Account of a Participant who is not then fully (100%) vested, then until the Participant's Employer Profit Sharing Account or Pension Account becomes fully (100%) vested or until the Participant incurs a Period of Severance of five (5) years, whichever first occurs, the Participant's Vested interest shall be determined by the more favorable to the Participant of the two following formulas:

- (a) The Participant's Vested interest in such Employer Profit Sharing Account or Pension Account at any relevant time shall not be less than an amount ("X") determined by the formula  $X = P(B + D) - D$ . For the purpose of applying the formula, "P" is the Vested percentage at the relevant time (determined pursuant to Section 5); "B" is the account balance at the relevant time; and "D" is the amount of the distribution; or,

- (b) (i) a separate account shall be established for the portion of the Employer Profit Sharing Account or Pension Account not so distributed and (ii) the Participant's Vested interest in such account at any relevant time shall not be less than an amount ("X") determined by the formula:  $X = P(B + (R \times D)) - (R \times D)$ . For the purpose of applying the formula, "P" is the Vested percentage at the relevant time (determined pursuant to Section 5); "B" is the separate account balance at the relevant time; "D" is the amount of the distribution; and "R" is the ratio of the separate account balance at the relevant time to the Employer Profit Sharing Account or Pension Account balance immediately after distribution.

For any employee who first completes an Hour of Service (for Vesting Service) on or after January 1, 2008, the following rule shall apply:

If a distribution is made of less than the entire Employer Profit Sharing Account or Pension Account of a Participant who is not then fully (100%) vested, then until the Participant's Employer Profit Sharing Account or Pension Account becomes fully (100%) vested or until the Participant incurs five (5) or more consecutive One-Year Breaks in Service, whichever first occurs, (i) a separate account shall be established for the portion of the Employer Profit Sharing Account or Pension Account not so distributed and (ii) the Participant's Vested interest in such account at any relevant time shall not be less than an amount ("X") determined by the formula:  $X = P(B + (R \times D)) - (R \times D)$ . For the purpose of applying the formula, "P" is the Vested percentage at the relevant time (determined pursuant to Section 5); "B" is the separate account balance at the relevant time; "D" is the amount of the distribution; and "R" is the ratio of the separate account balance at the relevant time to the Employer Profit Sharing Account or Pension Account balance immediately after distribution.

**3. ROLLOVER AND TRANSFER OF LOANS. Effective for Plan Years beginning on or after January 1, 2008, Section 7.6.6 shall be amended by adding a new subparagraph (l) to read in full as follows:**

- (l) **Rollovers and Transfers of Loans.** Pursuant to Section 9.3, the Committee may agree to the transfer of outstanding participant loans under another tax-qualified plan to this Plan if the transfer is in connection with a corporate acquisition or merger by or with the Principal Sponsor or an Affiliate. The Committee may also authorize that any employee who was formerly employed by a business entity that was acquired by the Principal Sponsor or an Affiliate and who receives an eligible rollover distribution which includes one (1) or more outstanding participant loans shall be permitted to rollover such outstanding participant loans to this Plan. The transfer or direct rollover of an outstanding participant loan shall be permitted only if the participant loan is not in default and the Participant agrees to continue to make loan payments to the Trustee through payroll deductions. The transfer or direct rollover of an outstanding



participant loan shall not be considered the issuance of a new loan or the renewal or rewriting of the original loan note. The terms of any outstanding participant loan that is transferred or rolled over to this Plan may differ from the loan provisions in this Section 7.6.

- 4. CREDITING OF PRIOR SERVICE FOR POCO ACQUISITION. Effective as of August 11, 2008, Schedule I of the Plan Statement shall be amended by replacing “As of August 6, 2005” with “As of August 11, 2008.”**
- 5. CREDITING OF PRIOR SERVICE FOR POCO ACQUISITION. Effective as of August 11, 2008, Schedule I of the Plan Statement shall be amended by adding to the end of Schedule I the following:**
  5. Poco Graphite, Inc. Notwithstanding any provision in Section 2.2 to the contrary, for purposes of determining whether an employee has satisfied the requirement under Section 3.5 that the employee be credited with One Thousand (1,000) Hours of Service to receive a discretionary contribution, all service with the Poco Graphite, Inc. earned from January 1, 2008 through August 11, 2008 shall be treated as service with Entegris, Inc. (for clarification purposes, compensation earned by employees of Poco Graphite, Inc. during the period from January 1, 2008 through August 11, 2008 will not be included in any discretionary contribution calculation).
- 6. COMPLIANCE WITH FINAL 415 REGULATIONS. Effective for limitation years beginning on or after January 1, 2008, Appendix A of the Plan Statement shall be amended by substituting therefore the Appendix A attached to this amendment.**
- 7. CLARIFICATION REGARDING PENSION DISTRIBUTIONS. Effective for all distributions payable after January 1, 2008, Section 2.1 of Appendix E shall be amended by replacing all references to “Vested Total Account” with “Vested Pension Account.”**
- 8. CLARIFICATION REGARDING PENSION DISTRIBUTIONS. Effective for all distributions payable after January 1, 2008, Section 2.3 of Appendix E shall be amended by replacing the reference to “Vested Total Account” in the first sentence of Section 2.3(a) with “Vested Pension Account.”**
- 9. CLARIFICATION REGARDING PENSION DISTRIBUTIONS. Effective for all distributions payable after January 1, 2008, Section 3.2 of Appendix E shall be amended by replacing the reference to “Vested Total Account” in the first sentence of Section 3.2(a) with “Vested Pension Account.”**
- 10. SAVINGS CLAUSE. Save and except as hereinabove expressly amended, the Plan Statement shall continue in full force and effect.**

**APPENDIX A**

**LIMITATION ON ANNUAL ADDITIONS**

Incorporating amendments of Code §415(c) regulations (T.D. 9313, April 5, 2007).  
Effective for limitation years beginning on or after July 1, 2007.

**SECTION 1**

**DEFINITIONS**

Terms defined in the Plan Statement shall have the same meanings when used in this Appendix. In addition, when used in this Appendix, the following terms shall have the following meanings:

1.1. **Annual Addition.** Annual addition means, with respect to any Participant for a limitation year, the sum of:

- (i) all employer contributions (including employer contributions of the Participant's earnings reductions under section 401(k), section 403(b) and section 408(k) of the Code) allocable as of a date during such limitation year to the Participant under all defined contribution plans;
- (ii) all forfeitures allocable as of a date during such limitation year to the Participant under all defined contribution plans; and
- (iii) all Participant contributions made as of a date during such limitation year to all defined contribution plans.

Notwithstanding the foregoing, if an employer contribution is made later than thirty (30) days after the due date, including extensions, of the employer's federal income tax return for the taxable year that includes the last day of the limitation year, the employer contribution shall be considered an annual addition for the limitation year in which the contribution is made. However, if the employer contribution is made to correct a nondiscrimination violation (e.g., section 401(a)(4) or section 410(b) of the Code) that date is extended until the fifteenth (15th) day of the tenth (10th) month following the end of the limitation year. A contribution made to restore an erroneous forfeiture in a prior limitation year or on behalf of a participant who was erroneously omitted from a prior limitation year's allocation shall be considered an annual addition for the limitation year to which it relates. If, in a particular limitation year, an amount is contributed with respect to a prior limitation year and such contribution is required by reason of such employee's rights under chapter 43 of title 38, United States Code (USERRA), resulting from qualified military service, as specified in section 414(u)(1) of the Code, then such contribution is not considered an annual addition with respect to the employee for that

limitation year in which the contribution is made, but, in accordance with section 414(u)(1)(B) of the Code, is considered an annual addition for the limitation year to which the contribution relates.

**1.1.1. Specific Inclusions.** With regard to a plan which contains a qualified cash or deferred arrangement or matching contributions or employee contributions, excess contributions and excess aggregate contributions (whether or not distributed during or after the limitation year) shall be considered annual additions in the year contributed. Excess deferrals that are not distributed in accordance with the regulations under section 402(g) of the Code are annual additions.

**1.1.2. Specific Exclusions.** The annual addition shall not, however, include any portion of a Participant's rollover contributions or any additions to accounts attributable to a plan merger or a transfer of plan assets or liabilities or any other amounts excludable under law. Excess deferrals that are distributed in accordance with the regulations under section 402(g) of the Code are not annual additions. The annual addition shall not include (i) any payments made to restore losses to a plan resulting from action that creates a reasonable risk of liability for breach of fiduciary duty under Title I of ERISA (or, in the case of Defined Contribution Plans not subject to ERISA, any other applicable federal or state law), any "catch-up" contributions made pursuant to section 414(v) of the Code, (ii) any previously forfeited amounts restored to an account in accordance with the plan terms, and (iii) any repayments of loans.

**1.1.3. ESOP Rules.** In the case of an employee stock ownership plan within the meaning of section 4975(e)(7) of the Code, annual additions shall not include any dividends or gains on sale of employer securities held by the employee stock ownership plan (regardless of whether such dividends or gains are (i) on securities which are allocated to Participants' accounts or (ii) on securities which are not allocated to Participants' accounts which, in the case of dividends used to pay principal on an employee stock ownership plan loan, result in employer securities being allocated to Participants' accounts or, in the case of a sale, result in sale proceeds being allocated to Participants' accounts). In the case of an employee stock ownership plan within the meaning of section 4975(e)(7) of the Code under which no more than one-third (1/3rd) of the employer contributions for a limitation year which are deductible under section 404(a)(9) of the Code are allocated to highly compensated employees (as defined in section 414(q) of the Code), annual additions shall not include forfeitures of employer securities under the employee stock ownership plan if such securities were acquired with the proceeds of an exempt loan or, if the Employer is not an S corporation as defined in section 1361(a)(1) of the Code, employer contributions to the employee stock ownership plan which are deductible by the employer under section 404(a)(9)(B) of the Code and charged against the Participant's account (*i.e.*, interest payments). The ESOP Committee may elect, in its sole discretion, to calculate annual additions using the fair market value of the Qualifying Employer Securities released from the suspense account due to an Exempt Loan repayment and allocated to Participants' Accounts for the limitation year, if that amount is less than the amount determined in accordance with Section 1.1(i).

1.2. **Controlled Group Member.** Controlled group member means the Employer and each member of a controlled group of corporations (as defined in section 414(b) of the Code and as modified by section 415(h) of the Code), all commonly controlled trades or businesses (as defined in section 414(c) of the Code and as modified by section 415(h) of the Code), affiliated service groups (as defined in section 414(m) of the Code) of which the Employer is a part and other organizations required to be aggregated for this purpose under section 414(o) of the Code.

1.3. **Defined Contribution Plans.** Defined contribution plans shall have the meaning assigned to that term by section 415(k)(1) of the Code. Whenever reference is made to defined contribution plans in this Appendix, it shall include all such plans maintained by the Employer and all controlled group members including terminated plans, plans maintained by predecessor employers and plans that were formerly maintained by the employer or a related employer but shall not include any multiemployer plan (as defined in section 414(f) of the Code).

1.4. **Individual Medical Account.** Individual medical account means an account, as defined in section 415(1)(2) of the Code maintained by the Employer or a controlled group member which provides an annual addition.

1.5. **Limitation Year.** Limitation year means the Plan Year.

1.6. **Maximum Permissible Addition.**

1.6.1. **General Rule.** Maximum permissible addition (a term that is relevant only with respect to defined contribution plans) means, for any one (1) limitation year, the lesser of

- (i) Forty Thousand Dollars (\$40,000), as adjusted automatically for increases in the cost of living by the Secretary of the Treasury pursuant to section 415(d) of the Code, or
- (ii) one hundred percent (100%) of the Participant's §415 compensation for such limitation year.

However, the dollar limit in (i) shall be prorated if all defined contribution plans are terminated before the end of the limitation year.

1.6.2. **Medical Benefits.** The dollar limitation in Section 1.6.1(i), but not the amount determined in Section 1.6.1(ii), shall be reduced by the amount of employer contributions which are allocated to a separate account established for the purpose of providing medical benefits or life insurance benefits with respect to a key employee (as defined in section 416 of the Code) under a welfare benefit fund or an individual medical account.

- 1.7. **Section 415 Compensation.** Section 415 compensation (sometimes, “§415 compensation”) shall mean, with respect to any limitation year, the amount determined as follows.
- (a) **General Definition.** Subject to the following rules, §415 compensation means the total wages, salaries, fees for professional services and other amounts received for personal services actually rendered in the course of employment with the Employer and all controlled group members to the extent that such amounts are includible in gross income. This shall include any amount which would have been received and includible in gross income but for an election under section 125(a), section 132(f)(4), section 402(e)(3), section 402(h)(1)(B), section 402(k) or section 457 of the Code. These amounts include, but are not limited to, commissions paid to salespersons, compensation for services on the basis of a percentage of profits, commissions on insurance premiums, tips, bonuses, fringe benefits and reimbursement or other expense allowances under a nonaccountable plan as described in §1.62-2(c).
  - (b) **Foreign Source Income.** Amounts paid as compensation for services do not fail to be treated as §415 compensation merely because those amounts are not includible in gross income on account of the location of the services or merely because those amounts are paid by an employer with respect to which all compensation paid by such employer is excluded from gross income. Thus, for example, the determination of whether an amount is §415 compensation shall be made without regard to the exclusions from gross income under sections 872, 893, 894, 911, 931 and 933 of the Code.
  - (c) **Cash Basis.** Section 415 compensation shall be included in the limitation year in which paid or made available (or would have been paid but for an election under section 125, 132(f)(4), 401(k), 403(b), 408(k), 408(p)(2)(A)(i) or 457(b) of the Code). Amounts received pursuant to a nonqualified unfunded deferred compensation plan are §415 compensation in the year actually received to the extent includible in gross income.
  - (d) **Comp Cap.** Section 415 compensation for a limitation year shall not exceed the applicable dollar limit under section 401(a)(17) of the Code for that limitation year (e.g., \$230,000 for a limitation year beginning in 2008).
  - (e) **Add-Backs.** Section 415 compensation shall also include any elective deferral as defined in section 402(g)(3) of the Code and any amount which would have been received and includible in gross income but for an election under section 125(a), section 132(f)(4), section 402(e)(3), section 402(h)(1)(B), section 402(k) or section 457 of the Code.
  - (f) **Constructively Received Income.** Amounts includible in federal taxable income under section 409A of the Code or section 457(f)(1)(A) of the Code and other amounts constructively received in income are §415 compensation at the time that they are so included in income. Section 415 compensation shall also include amounts includible in gross income upon making the election described in section 83(b) of the Code.

- (g) **Miscellaneous.** Section 415 compensation shall also include, (i) in the case of an employee who is an employee within the meaning of section 401(c)(1) of the Code and regulations promulgated under section 401(c)(1) of the Code, the employee's earned income (as described in section 401(c)(2) of the Code and regulations promulgated under section 401(c)(2) of the Code, plus amounts deferred at the election of the employee that would be includible in gross income but for the rules of section 402(e)(3), 402(h)(1)(B), 402(k), or 457(b) of the Code and (ii) amounts described in section 104(a)(3), 105(a), or 105(h) of the Code, but only to the extent that these amounts are includible in the gross income of the employee, and (iii) amounts paid or reimbursed by the employer for moving expenses incurred by an employee, but only to the extent that at the time of the payment it is reasonable to believe that these amounts are not deductible by the employee under section 217 of the Code, and (iv) the value of a nonstatutory option (which is an option other than a statutory option as defined in §1.421-1(b)) granted to an employee by the employer, but only to the extent that the value of the option is includible in the gross income of the employee for the taxable year in which granted.
- (h) **Exclusions.** Notwithstanding the foregoing, §415 compensation shall not include any of the following.
- (i) Contributions (other than elective deferrals) to a plan of deferred compensation to the extent the contributions are not includible in gross income for the year the contribution is added.
  - (ii) Amount realized from the exercise of a nonstatutory option or when restricted stock or other property either becomes freely transferable or is no longer subject to a substantial risk of forfeiture.
  - (iii) Amounts realized from the sale, exchange or other disposition of stock acquired under a statutory stock option.
  - (iv) Other amounts receiving special tax benefits such as premiums for group-term life insurance (but only to the extent that the premiums are not includible in gross income and are not salary reduction amounts described in section 125 of the Code).
- (i) **Post-Severance Pay.** Notwithstanding the foregoing, §415 compensation shall not include any amounts received after an employee's severance from employment except as follows.
- (i) **Regular Pay.** Regular pay (e.g., regular base pay, overtime, shift differential pay, commissions, bonuses and other similar compensation) shall be included if (A) it is paid not later than the end of the limitation year that includes the severance from

employment date or, if later, two and one-half (2-1/2) months after the severance from employment date, and (B) it would have been paid if there had been no severance from employment.

- (ii) **Unused Leave.** Payments of unused accrued bona fide sick leave, vacation or other leave shall be included if it is paid not later than the end of the limitation year that includes the severance from employment date or, if later, two and one-half (2-1/2) months after severance from employment.
- (iii) **NQDC.** Payments of nonqualified unfunded deferred compensation plan shall be included if (A) it is received not later than the end of the limitation year that includes the severance from employment date or, if later, two and one-half (2-1/2) months after the severance from employment date, and (B) it would have been paid if there had been no severance from employment.
- (iv) **Actual USERRA and Disability.** Payments of compensation paid to employees performing qualified military service (e.g., “differential pay”) and to employees who are totally and permanently disabled shall be included if the payments do not exceed the amounts the employee would have received if employment had continued.
- (v) **Imputed Disability Pay.** The compensation an employee would have received for the limitation year shall be included if the following conditions are satisfied: (A) the employee is totally and permanently disabled within the meaning of section 22(e)(3) of the Code, and (B) either (x) the employee is not a highly compensated employee immediately before becoming disabled or (y) the terms of the plan provide for the continuation of contributions on behalf of all participants who are permanently and totally disabled for a fixed or determinable period, and (C) the plan provides that such amounts are taken into account for the purpose of making contributions, and (D) all contributions made with respect to such imputed compensation are nonforfeitable when made.

1.8. **Welfare Benefit Fund.** Welfare benefit fund means a fund as defined in section 419(e) of the Code which provides post-retirement medical benefits allocated to separate accounts for key employees as defined in section 419A(d)(3).

## SECTION 2

### DEFINED CONTRIBUTION LIMITATION

Notwithstanding anything to the contrary contained in the Plan Statement, there shall not be allocated to the account of any Participant under a defined contribution plan for any limitation year an amount which would cause the annual addition for such Participant to exceed the maximum permissible addition. Subject to the provisions of this Appendix, the limitations of section 415(c) of the Code (and regulations issued pursuant thereto) are incorporated by reference in this Appendix.

## SECTION 3

### SUSPENSION OF ANNUAL ADDITIONS

3.1. **Temporary Suspension.** If as of any date during a limitation year it is determined that a Participant's annual additions that would be made then under other provisions of this Plan Statement would exceed the maximum permissible addition as of that date, the contributions and allocations to that Participant's accounts shall be made only to the extent that they can be made without causing any such excess to occur. Therefore, the contributions and allocations to be made as of that date shall be made in the following sequence to the extent permitted.

(a) **Employer Contributions – Not Matching.**

- (i) Employer contributions to defined contribution pension plans (e.g., money purchase pension plans including target benefit pension plans).
- (ii) Employer fixed (non-discretionary, non-matching) contributions to defined contribution profit sharing plans and stock bonus plans.
- (iii) Employer discretionary (non-matching) contributions to defined contribution profit sharing plans and stock bonus plans.

(b) **Employee Matched and Employer Matching Contributions.**

- (i) Employee non-Roth matched elective deferrals (within the meaning of section 402(g)(3) of the Code) to defined contribution profit sharing plans and stock bonus plans.
- (ii) Employee Roth matched elective deferrals (within the meaning of section 402(g)(3) of the Code) to defined contribution profit sharing plans and stock bonus plans.



- (iii) Employee matched after-tax contributions to defined contribution profit sharing plans and stock bonus plans.
- (iv) Employer non-discretionary fixed matching contributions to defined contribution profit sharing and plans and stock bonus plans.
- (v) Employer discretionary matching contributions to defined contribution profit sharing plans and stock bonus plans.
- (c) **Employee Contributions – Not Matched.**
  - (i) Employee non-Roth unmatched elective deferrals (within the meaning of section 402(g)(3) of the Code) to defined contribution profit sharing plans and stock bonus plans.
  - (ii) Employee Roth unmatched elective deferrals (within the meaning of section 402(g)(3) of the Code) to defined contribution profit sharing plans and stock bonus plans.
  - (iii) Employee unmatched after-tax contributions to defined contribution profit sharing plans and stock bonus plans.
- (d) **Other.**
  - (i) All other contributions and allocations (but excluding forfeitures to be reallocated).
  - (ii) Forfeitures to be reallocated.

3.2. **Tie Breaker.** If a contribution or allocation that would be in two (2) or more plans in the same priority cannot be made because of the foregoing rules, the contribution or allocation shall be made among the plans in chronological order as determined by the effective date of each plan (using the original effective date of the plan) beginning with the plan that was first established.

NINTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)

WHEREAS, Entegris, Inc. (the "Principal Sponsor") has heretofore established and maintains a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended (collectively, the "Plan Statement"); and

WHEREAS, The Principal Sponsor has reserved to itself the power to make further amendments of the Plan Statement.

NOW, THEREFORE, The Plan Statement is hereby amended as follows:

1. **MATCHING CONTRIBUTION REDUCTION. Effective as of January 1, 2009 or as soon thereafter as administratively and legally feasible, Sections 3.3.1 and 3.3.2 of the Plan Statement shall be amended to read in full as follows:**
  - 3.3.1. **Amount and Eligibility.** The Employer shall contribute to the Trustee for deposit in the Fund and for crediting to the Participant's Employer Matching Account an amount which will equal fifty percent (50%) of the amount of the first three percent (3%) and twenty-five percent (25%) of the amount of the next two percent (2%) of reduction in Recognized Compensation for each pay period which was agreed to by the Participant pursuant to a Retirement Savings Election. Such Employer matching contributions shall be delivered to the Trustee for deposit in the Fund not later than the time prescribed by federal law (including extensions) for filing the federal income tax return of the Employer for the taxable year in which the Plan Year ends.
  - 3.3.2. **Matching Contributions Determined on an Annual Basis.** If the matching contributions made with respect to any Participant for the Plan Year are less than fifty percent (50%) of the first three percent (3%) and twenty-five percent (25%) of the amount of the next two percent (2%) of reduction in Recognized Compensation for such Plan Year, then the Employer shall make an additional matching contribution to the Plan so that the total matching contributions with respect to such Participant for such Plan Year will equal fifty percent (50%) of the first three percent (3%) and twenty-five percent (25%) of the amount of the next two percent (2%) of the Participant's reduction in Recognized Compensation for such Plan Year.
2. **CONFORMING CHANGES. Wherever the amount of Employer Matching Contributions is set forth in the Plan Statement, such language shall be amended to read in full as follows: "fifty percent (50%) of the first three percent (3%) and twenty-five percent (25%) of the amount of the next two percent (2%) of reduction in Recognized Compensation for such Plan Year."**
3. **SAVINGS CLAUSE. Save and except as herein expressly amended, the Plan Statement shall continue in full force and effect.**

**TENTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

Entegris, Inc., a Delaware corporation, has heretofore established and maintains a profit sharing plan (the "Plan") which, in most recent amended and restated form, is embodied in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended by ninth (collectively, the "Plan Statement"). The Plan Statement is hereby further amended in the following respects:

1. **DEFINITION OF RETIREMENT SAVINGS ACCOUNT. Effective for Plan Years beginning on or after January 1, 2009, Section 1.1.1(b) of the Plan Statement shall be amended to read in full as follows:**
  - (b) **Retirement Savings Account** — the Account maintained for each Participant to which are credited the Employer contributions made in consideration of such Participant's elective contributions pursuant to Section 3.2, or Employer contributions made pursuant to Section 2.3 of Appendix D, together with any increase or decrease thereon.
2. **DEFINITION OF EMPLOYER MATCHING ACCOUNT. Effective for Plan Years beginning on or after January 1, 2009, Section 1.1.1(d) of the Plan Statement shall be amended to read in full as follows:**
  - (d) **Employer Matching Account**—the Account maintained for each Participant to which is credited (i) the Participant's allocable share of the Employer contributions made pursuant to Section 3.3, (ii) the Participant's interest, if any, in employer matching contributions transferred from any plan that was merged into the Plan, and (iii) Employer contributions made pursuant to Section 3.3 of Appendix D, together with any increase or decrease thereon.
3. **EFFECTIVE DATE FOR INITIAL REDUCTION IN MATCHING CONTRIBUTION RATE. The Principal Sponsor wishes to clarify that Items 1 and 2 of the Ninth Amendment are effective for Employer matching contributions made to the Plan for payroll periods beginning on or after February 22, 2009 and prior to March 22, 2009.**

4. **EMPLOYER MATCHING CONTRIBUTIONS RATES. Effective for Employer matching contributions made to the Plan for pay periods beginning on or after March 22, 2009, Section 3.3 of the Plan Statement shall be amended to read in full as follows:**

**3.3. Employer Discretionary Matching Contributions.**

**3.3.1. Amount.** The Employer may (but shall not be required to) make discretionary matching contributions from year to year during the continuance of the Plan in such amounts as the Employer shall from time to time determine. Such contributions shall be delivered to the Trustee for deposit in the Fund not later than the time prescribed by federal law (including extensions) for filing the federal income tax return of the Employer for the taxable year in which the Plan Year ends.

**3.3.2. Allocation.** The Employer discretionary matching contribution, if any, for a Plan Year shall be allocated to the Employer Matching Accounts of Participants to match a percentage, determined by the Employer, of each Participant's reduction in Recognized Compensation for each pay period which was agreed to by the Participant pursuant to a Retirement Savings Election; provided, however, that the reduction in Recognized Compensation above a percentage of the Participant's Recognized Compensation specified by the Employer shall not be used in allocating such contribution. If the Employer makes no such determination for a Plan Year, the "matching percentage" and "matching level" shall each be zero percent (0%) for that Plan Year.

**3.3.3. Matching Contributions Determined on an Annual Basis.** If the discretionary matching contributions made with respect to any Participant for the Plan Year are less than the matching percentage (designated by the Employer) up to the matching level (designated by the Employer) of the amount of reduction in Recognized Compensation for such Plan Year, then the Employer may, if it so determines, make an additional matching contribution to the Plan so that the total matching contributions with respect to such Participant for such Plan Year will equal the matching percentage up to the matching level of the amount of the Participant's reduction in Recognized Compensation for such Plan Year.

**3.3.4. Allocation.** The Employer discretionary matching contribution which is made with respect to a Participant shall be allocated to that Participant's Employer Matching Account for the Plan Year with respect to which it is made and, for the purposes of Section 4, shall be credited as soon as practicable after it is received by the Trustee.

5. **AUTHORITY TO AMEND PLAN.** Effective as of the date this amendment is adopted, Section 9.1 of the Plan Statement shall be amended to read in full as follows:

9.1. **Amendment.** The Principal Sponsor reserves the power to amend this Plan Statement in any respect and either prospectively or retroactively or both:

(a) in any respect by resolution of its Board of Directors; and

(b) in any respect that does not materially increase the cost of the Plan by action of the Committee;

provided that no amendment shall be effective to reduce or divest the Total Account of any Participant unless the same shall have been adopted with the consent of the Secretary of Labor pursuant to the provisions of ERISA, or in order to comply with the provisions of the Code and the regulations and rulings thereunder affecting the tax-qualified status of the Plan and the deductibility of Employer contributions thereto. Notwithstanding the foregoing, no amendment shall be effective to increase the duties of the Trustee without its consent. No oral or written statement shall be effective to amend the Plan Statement unless it is duly authorized by the Board of Directors or the Committee. The power to amend the Plan Statement may not be delegated. Notwithstanding anything in this Plan Statement to the contrary, the Committee may adopt rules to facilitate compliance with the federal securities laws and all regulations and rules thereunder, including Section 16 of the Securities Exchange Act, which rules may limit rights under the Plan for certain Participants.

6. **AUTHORITY OF BOARD OF DIRECTORS.** Effective as of the date this amendment is adopted, Section 12.1.3(a) of the Plan Statement shall be amended to read in full as follows:

(a) to terminate the Plan,

7. **APPENDIX D, NONDISCRIMINATION TESTING PROVISIONS.** Effective for all Plan Years beginning on or after January 1, 2009, Appendix D to the Plan Statement shall be amended by substituting therefore the Appendix D attached to this amendment. The rule in Section 1.1.4 of Appendix D shall be effective for Plan Years beginning on or after January 1, 2008.

8. **SAVINGS CLAUSE.** Save and except as hereinabove expressly amended, the Plan Statement shall continue in full force and effect.

## APPENDIX D

### 401(k), 401(m) & 402(g) COMPLIANCE

**Introduction.** This Appendix D contains rules for complying with the nondiscrimination provisions of sections 401(k) and 401(m) of the Code and the limitations imposed under section 402(g) of the Code.

**Priority.** Determinations under this Appendix shall be made in the following order:

- (1) Excess deferrals under Section 1,
- (2) Excess contributions under Section 2,
- (3) Excess aggregate contributions under Section 3.

The amount of excess contributions shall be reduced by excess deferrals previously distributed to such Participant for the Participant's taxable year ending with or within such Plan Year.

### SECTION 1 SECTION 402(g) COMPLIANCE

#### 1.1. Excess Deferrals.

**1.1.1. In General.** A Participant may attribute to this Plan any excess deferrals made during a taxable year of the Participant by notifying the Committee in writing not later than the March 1 following such taxable year of the amount of the excess deferral to be assigned to the Plan. A Participant shall be deemed to have notified the Plan of excess deferrals to the extent the Participant has excess deferrals for the taxable year calculated by taking into account only the amount of elective contributions (both pre-tax and Roth contributions) allocated to the Participant's Retirement Savings Account and, if applicable, Roth Account and to any other plan of the Employer and Affiliates. Notwithstanding any other provision of the Plan Statement, a Participant's excess deferrals, plus any income and minus any loss allocable thereto, shall be distributed to the Participant no later than the first April 15 following the close of the Participant's taxable year. If a Participant is eligible to make catch-up contributions pursuant to Section 2 of the Plan Statement but such Participant does not make the catch-up contributions or does not make the maximum allowable catch-up contributions for such taxable year, then the Participant's excess deferrals shall first be re-characterized as catch-up contributions, to the extent permitted under section 414(v) of the Code, and any remaining excess deferrals, plus any income and minus any loss allocable thereto, shall be distributed to the Participant no later than the first April 15 following the close of the Participant's taxable year.

**1.1.2. Definitions.** For purposes of this Appendix, excess deferrals shall mean the amount of elective contributions (both pre-tax and Roth contributions) allocated to the Participant's Retirement Savings Account and, if applicable, Roth Account for a Participant's taxable year and which the Participant or the Employer, where applicable, allocates to this Plan pursuant to the claim procedure described below.

**1.1.3. Claims.** The Participant's claim shall be in writing; shall be submitted to the Committee not later than March 1 with respect to the immediately preceding taxable year; shall specify the amount of the Participant's excess deferrals for the preceding taxable year; and shall be accompanied by the Participant's written statement that if such amounts are not distributed, such excess deferrals, when added to amounts deferred under other plans or arrangements described in sections 401(k), 402A, 408(k), 408(p), 457, 501(c)(18) or 403(b) of the Code, will exceed the limit imposed on the Participant by section 402(g) of the Code for the taxable year in which the deferral occurred. If the Participant made any Roth contributions during the preceding taxable year, the Participant's claim shall also specify the extent to which, if any, the excess deferrals are comprised of Roth contributions. The Employer shall notify the Plan on behalf of the Participant where the excess deferrals occur in the Plan or the combined plans of the Employer and Affiliates. Such notification shall provide that distribution of the excess deferrals shall be made first from the Participant's Retirement Savings Account, to the extent pre-tax elective contributions were made for the taxable year, and then from the Participant's Roth Account to the extent Roth contributions were made for the taxable year, unless the Participant specifies otherwise.

**1.1.4. Determination of Income or Loss.** The excess deferrals shall be adjusted for income or loss for the taxable year (but not the gap period). Unless the Committee and the recordkeeper for the Plan agree otherwise in writing, the income or loss allocable to excess deferrals shall be determined by multiplying the income or loss allocable to the Participant's elective contributions for the Plan Year ending within such preceding taxable year by a fraction, the numerator of which is the excess deferrals on behalf of the Participant for such preceding taxable year and the denominator of which is the sum of the Participant's account balances attributable to elective (both pre-tax and Roth) contributions on the Valuation Date coincident with or immediately before the last day of such preceding taxable year, without regard to any income or loss occurring during such preceding taxable year.

**1.1.5. Accounting for Excess Deferrals.** Excess deferrals shall be distributed from the Participant's Retirement Savings Account and, if applicable, the Participant's Roth Account.

**1.1.6. Orphaned Matching Contributions.** If excess deferrals are distributed pursuant to this Section 1.1, applicable matching contributions under Section 3.3 of the Plan Statement shall be treated as forfeitures and reallocated as provided in Section 6.2 of the Plan Statement.

SECTION 2

SECTION 401(k) COMPLIANCE

2.1. Section 401(k) Compliance.

2.1.1. **Special Definitions.** For purposes of this Section 2, the following special definitions shall apply:

- (a) An **eligible employee** means an individual who is entitled to provide a Retirement Savings Election for all or a part of the Plan Year (whether or not the individual does so). If, for any Plan Year, the individuals who have not satisfied the minimum age and service requirements specified in section 410(a)(1) of the Code (*i.e.*, have not completed one (1) year of service and attained age twenty-one (21) years), would satisfy the requirements of section 410(b)(1) (*i.e.*, the “ratio percentage” or “average benefit percentage” coverage test) if tested separately from other eligible employees, then for that Plan Year, the individuals who have not satisfied the minimum age and service requirements with respect to that Plan Year may, at the election of the Committee, be entirely excluded from consideration in determining who is an eligible employee. Alternatively, the Committee may, if it so elects, exclude from consideration in determining who is an eligible employee only those individuals who have not satisfied the minimum age and service requirements specified in section 410(a)(1) of the Code and are not Highly Compensated Employees with respect to that Plan Year.
- (b) An **eligible Highly Compensated Employee (“eligible HCE”)** means an eligible employee who is a Highly Compensated Employee.
- (c) An **eligible Nonhighly Compensated Employee (“eligible NHCE”)** means an eligible employee who is not a Highly Compensated Employee.
- (d) **Deferral percentage** means the ratio (calculated separately for each eligible employee) of:
  - (i) the total amount, for the Plan Year, of Employer contributions credited to the eligible employee’s Retirement Savings Account and, if applicable, Roth Account excluding:
    - (A) any catch-up elective contributions,
    - (B) the excess deferrals, as defined in Section 1 of this Appendix, of any eligible NHCE, and



(C) any Employer contributions to the Retirement Savings Account and, if applicable, Roth Account used in determining the contribution percentage in Section 3.1.1(d)(i) of this Appendix,

and including:

- (A) the excess deferrals, as defined in Section 1 of this Appendix, of any eligible HCE but only to the extent such excess deferrals are attributable to this Plan (or any other plan of the Employer and all Affiliates), and
- (B) if the Committee elects, all or a portion of the amount of Employer contributions credited to the eligible employee's Employer Matching Account that are not used in determining the contribution percentage in Section 3.1.1(d)(i) of this Appendix, provided such Employer matching contributions are fully (100%) vested and not available for in-service distribution prior to the Participant's attainment of age 59-1/2, whether for hardship or otherwise, to

(ii) the eligible employee's compensation, as defined below, for the portion of such Plan Year that the employee is an eligible employee.

For this purpose, Employer contributions will be considered made in the Plan Year if they are allocated as of a date during such Plan Year and are delivered to the Trustee within twelve (12) months after the end of such Plan Year.

- (e) **Compensation** means compensation for services performed for the Employer defined as "§ 415 compensation" in Appendix A to this Plan Statement. Notwithstanding the definition of "§ 415 compensation" in Appendix A to this Plan Statement compensation shall always be determined on a cash (and not on an accrual) basis and compensation shall be determined on a Plan Year basis (which is not necessarily the same as the limitation year). Except as provided in Section 2.1.2(b) of this Appendix, compensation for purposes of this Section 2 shall be limited to the portion of such Plan Year that the employee is an eligible employee. An eligible employee's compensation for a Plan Year shall not exceed the annual compensation limit under section 401(a)(17) of the Code, which is Two Hundred Forty-Five Thousand Dollars (\$245,000) for 2009 (as adjusted under the Code for cost-of-living increases).

- (f) **Average deferral percentage** means, for a specified group of eligible employees for the Plan Year, the average of the deferral percentages for all eligible employees in such group.
- (g) **Plan's 401(k) representative contribution rate** means the greater of:
  - (i) the lowest applicable contribution rate of any eligible NHCE among a group of eligible NHCEs that consists of at least one-half (1/2) of all eligible NHCEs for the Plan Year, or
  - (ii) the lowest applicable contribution rate of any eligible NHCE in the group of all eligible NHCEs who are employed on the last day of the Plan Year.
- (h) **Applicable contribution rate** means, for an eligible NHCE for the Plan Year, the ratio of:
  - (i) the total amount, for the Plan Year, of Employer qualified nonelective contributions credited to the eligible NHCE's Retirement Savings Account and of Employer contributions credited to the eligible NHCE's Employer Matching Account that are used in determining the deferral percentage in Section 2.1.1(d)(i) of this Appendix, to
  - (ii) the eligible employee's compensation, as defined above, for the portion of such Plan Year that the employee is an eligible employee.

2.1.2. **Special Rules.** For purposes of this Section 2.1, the following special rules apply:

- (a) **Rounding.** The deferral percentage of each eligible employee and the average deferral percentage for each group of eligible employees shall be calculated to the nearest one-hundredth of one percent.
- (b) **HCE Eligible to Participate in Multiple Plans.** The deferral percentage of any eligible HCE who is eligible to participate in any other plan of the Employer and all Affiliates to which Employer contributions are made on behalf of the eligible HCE pursuant to a deferral election (whether direct or indirect), shall be equal to the ratio of:
  - (i) the sum of all such Employer contributions, and if used to determine the deferral percentage of eligible employees, matching contributions (as defined in section 401(m)(4)(A) of the Code which meet the requirements of sections 401(k)(2)(B) and 401(k)(2)(C) of the Code) or qualified nonelective contributions (within the meaning of section 401(m)(4)(C) of the Code), or both, under all such plans for the Plan Year.

(ii) the eligible employee's compensation (as defined in Section 2.1.1 of this Appendix) for the entire Plan Year.

If an eligible HCE participates in two or more plans of the Employer and all Affiliates that have different plan years, all elective (pre-tax and Roth) contributions (and, if used to determine the deferral percentage of eligible employees, matching contributions or qualified nonelective contributions, or both) made during the Plan Year under all such plans (other than those that may be permissively aggregated) shall be aggregated. Notwithstanding the foregoing, certain plans shall be treated as separate if mandatorily disaggregated pursuant to section 1.401(k)-1(b)(4) of the Income Tax Regulations.

(c) **Permissive Aggregation.** If this Plan satisfies the requirements of Sections 401(k), 401(a)(4) or 410(b) of the Code only if aggregated with one or more other plans, or if one or more other plans satisfy the requirements of such sections of the Code only if aggregated with this Plan, then this Section 2.1 shall be applied by determining the average deferral percentage of eligible employees as if all such plans were a single plan. Plans may be aggregated in order to satisfy section 401(k) of the Code only if they have the same Plan Year and use the same 401(k) testing method.

**2.1.3. The 401(k) Tests-Current Year Testing Method.** Notwithstanding the foregoing provisions, at least one of the following two (2) tests must be satisfied for each Plan Year:

**Test 1:** The average deferral percentage for the group of eligible HCEs for the current Plan Year is not more than the average deferral percentage for the group of eligible NHCEs for the current Plan Year multiplied by one and twenty-five hundredths (1.25).

**Test 2:** The excess of the average deferral percentage for the group of eligible HCEs for the current Plan Year over the average deferral percentage for the group of all eligible NHCEs for the current Plan Year is not more than two (2) percentage points, and the average deferral percentage for the group of eligible HCEs for the current Plan Year is not more than the average deferral percentage for the group of all eligible NHCEs for the current Plan Year multiplied by two (2).

The Committee may elect to substitute the average deferral percentage for the group of all eligible NHCEs for the preceding Plan Year for the average deferral percentage for the group of all other eligible NHCEs for the current Plan Year in Tests 1 and 2 above (*i.e.*, elect the prior year testing method) only if:

- (a) the Plan has used the current year testing method for each of the five (5) preceding Plan Years (or if lesser, the number of Plan Years the Plan has been in existence, including years in which the Plan was a portion of another plan), or
- (b) as a result of a merger or acquisition described in section 410(b)(6)(C)(i) of the Code, the Employer maintains this Plan, which uses the current year testing method, and another plan, which uses the prior year testing, and the Committee changes this Plan's testing method to the prior year testing method within the transition period described in Section 410(b)(6)(C)(ii) of the Code.

**2.1.4. Preventative Action Prior to Plan Year End.** If the Committee determines that neither of the tests described in Section 2.1.3 will be satisfied (or may not be satisfied) for a Plan Year, then during such Plan Year, the Committee may from time to time establish (and modify) a maximum amount of contributions (both pre-tax and Roth) that can be made pursuant to a Retirement Savings Election by eligible HCEs that is less than the amount that would otherwise be permitted. No contributions shall be permitted to be made in excess of that maximum after the date such maximum is effective. The Committee shall prescribe rules concerning such modifications, including the frequency of applying the tests described in Section 2.1.3 and the commencement and termination dates for any modifications.

**2.2. Distribution of Excess Contributions.**

**2.2.1. In General.** Notwithstanding any other provision of the Plan Statement, excess contributions for a Plan Year, plus any income and minus any loss allocable thereto, shall be distributed no later than the last day of the following Plan Year, to eligible HCEs as determined in this Section.

**2.2.2. Determining Excess Contributions.** For purposes of this Section 2.2, excess contributions shall mean, with respect to any Plan Year, the excess of:

- (a) the aggregate amount of Employer contributions taken into account in computing the average deferral percentage of eligible HCEs for such Plan Year, over
- (b) the maximum amount of such contributions permitted by the section 401(k) test described in Section 2.1 of this Appendix. Such maximum amount of contributions shall be determined by reducing (not distributing) eligible HCEs' contributions as follows:
  - (i) The contributions made pursuant to a Retirement Savings Election of the eligible HCE who has the highest deferral percentage (as defined in Section 2.1 of this Appendix) shall be reduced by the amount required to cause such eligible HCE's deferral percentage to equal the next highest deferral percentage of an eligible HCE.

- (ii) If neither of the tests is satisfied after such reduction, the contributions made pursuant to a Retirement Savings Election of the eligible HCEs who then have the highest deferral percentage (including those eligible HCEs whose contributions were reduced under (i) above) shall be reduced by the amount required to cause such eligible HCEs' deferral percentage to equal the next highest deferral percentage of an eligible HCE.
- (iii) If neither of the tests is satisfied after such reduction, this method of reduction shall be repeated one or more additional times until one of the tests is satisfied.

**2.2.3. Method of Distributing Excess Contributions.** Excess contributions, plus any income and minus any loss allocable thereto, shall be distributed from the eligible HCE's Retirement Savings Account and, if applicable, Roth Account. If the Participant made both pre-tax elective contributions and Roth contributions for the Plan Year, the distribution of excess contributions shall be made first from the Participant's Retirement Savings Account, to the extent pre-tax elective contributions were made during the Plan Year, and then from the Participant's Roth Account, to the extent Roth contributions were made during the Plan Year, unless the Participant specifies otherwise. If the excess contributions exceed the amount of Employer contributions credited to the eligible HCE's Retirement Savings Account and, if applicable, Roth Account for such Plan Year, then the remaining excess contributions, plus any income and minus any loss allocable thereto, shall be distributed from the eligible HCE's Employer Matching Account but only if matching contributions (as defined in Section 401(m)(4) of the Code which meet the requirements of Sections 401(k)(2)(B) and 401(k)(2)(C) of the Code) are used to determine the deferral percentage under Section 2.1.1(d) of this Appendix for such Plan Year. The amount of excess contributions to be allocated and distributed on behalf of each eligible HCE for the Plan Year shall be equal to the amount of reduction determined as follows:

- (a) The contributions made pursuant to a Retirement Savings Election of the eligible HCE who has the highest dollar amount of such contributions shall be reduced by the amount required to cause such eligible HCE's contributions to equal the next highest dollar amount contributed by eligible HCEs (and the amount credited pursuant to Section 3.2 of the Plan Statement, and the applicable amount, if any, credited pursuant to Section 3.3 of the Plan Statement shall be reduced accordingly).

- (b)** If any excess contributions remain after performing (a), then the eligible HCEs who have the next highest dollar amount of contributions made pursuant to a Retirement Savings Election (including those eligible HCEs reduced under (a) above) shall be reduced by the amount required to cause such eligible HCEs' contributions to equal the next highest dollar amount contributed by eligible HCEs (and the amount credited pursuant to Section 3.2 of the Plan Statement, and the applicable amount, if any, credited pursuant to Section 3.3 of the Plan Statement shall be reduced accordingly).
- (c)** If any excess contributions remain after performing (a) and (b), this method of reduction shall be repeated one or more additional times until no excess contributions remain.

Provided, however, if the total amount of reduction determined in (a), (b) and (c) would be greater than the amount of excess contributions, then the final reduction amount shall be decreased so that the total amount of reductions equals the amount of excess contributions. If excess contributions are allocated to an eligible HCE who is eligible to make catch-up contributions to this Plan and who does not make the maximum allowable catch-up contributions for such Plan Year under Section 414(v) of the Code, then such excess contributions shall first be re-characterized as catch-up contributions, to the extent permitted under section 414(v) of the Code, and any remaining excess contributions shall be distributed from the eligible HCE's Retirement Savings Account and, if applicable, Roth Account.

**2.2.4. Determination of Income or Loss.** The excess contributions to be distributed to any eligible HCE shall be adjusted for income or loss for the Plan Year (but not the gap period). Unless the Committee and the recordkeeper for the Plan agree otherwise in writing, the income or loss allocable to excess contributions to be distributed shall be determined by multiplying the income or loss allocable to the eligible HCE's elective (both pre-tax and Roth) contributions, and if used to determine an eligible HCE's deferral percentage under Section 2.1 of this Appendix, matching contributions (as defined in Section 401(m)(4) of the Code which meet the requirements of Sections 401(k)(2)(B) and 401(k)(2)(C) of the Code) for the Plan Year by a fraction, the numerator of which is the excess contributions to be distributed to the eligible HCE for the Plan Year and the denominator of which is the sum of the eligible HCE's account balances attributable to elective (both pre-tax and Roth) contributions and such matching contributions on the last day of the Plan Year, without regard to any income or loss occurring during such Plan Year.

**2.2.5. Orphaned Matching Contributions.** If excess contributions are distributed pursuant to this Section 2.2, applicable matching contributions under Section 3.3 of the Plan Statement shall be treated as forfeitures and reallocated as provided in Section 6.2 of the Plan Statement.

**2.3. Section 401(k) Curative Contribution.**

**2.3.1. Amount and Eligibility.** If neither of the Section 401(k) tests set forth in Section 2.1 of this Appendix has been satisfied and a distribution of "excess contributions" has not been made pursuant to Section 2.2 of this Appendix, then the Employer shall make a discretionary contribution for that Plan Year. Forfeitures shall not be included in this allocation. Only those Participants who were eligible NHCEs for that Plan Year shall share in such allocation. This allocation shall be made first to the Participant with the least amount of compensation and then, in ascending order of compensation, to other Participants. The amount of the Employer discretionary contribution to be so allocated shall be that amount required to cause the Plan to satisfy either of the Section 401(k) tests set forth in Section 2.1 of this Appendix for the Plan Year; provided, however, that in no case shall any amounts be allocated to a Participant in excess of an amount equal to the Participant's compensation as defined in Section 2.1.1 above, for the portion of such Plan Year that the employee is an eligible employee multiplied by the greater of:

(a) five percent (5%); or

(b) the Plan's 401(k) representative contribution rate (as defined in Section 2.1 of this Appendix) for such Plan Year multiplied by two (2).

Such Employer discretionary contribution shall be treated as a qualified nonelective contribution subject to section 1.401(k)-2(a)(6) of the Income Tax Regulations, which is incorporated herein.

- 2.3.2. **Crediting to Account.** The Employer discretionary contribution which is so allocated to a Participant shall be allocated to that Participant's Retirement Savings Account for the Plan Year with respect to which it is made and, for the purposes of Section 4 of the Plan Statement, shall be credited as soon as practicable after it is received by the Trustee.

### SECTION 3

#### SECTION 401(m) COMPLIANCE

3.1. **Section 401(m) Compliance.**

3.1.1. **Special Definitions.** For purposes of this Section 3, the following special definitions shall apply:

- (a) An **eligible employee** means an individual who is eligible to receive an Employer matching contribution for any portion of the Plan Year (whether or not the individual does so). If, for any Plan Year, the individuals who have not satisfied the minimum age and service requirements specified in Section 410(a)(1) of the Code (*i.e.*, have not completed one (1) year of service and attained age twenty-one (21) years), would satisfy the requirements of Section 410(b)(1) (*i.e.*, the "ratio percentage" or "average benefit percentage" coverage test) if tested separately from other eligible employees, then for that Plan Year, the individuals who have not satisfied the minimum age and service requirements with respect to that Plan Year may, at the election of the Committee, be entirely excluded from consideration in determining who is an eligible employee. Alternatively, the Committee may, if it so elects, exclude from consideration in determining who is an eligible employee only those individuals who have not satisfied the minimum age and service requirements specified in Section 410(a)(1) of the Code and are not Highly Compensated Employees with respect to that Plan Year.



- (b) An **eligible Highly Compensated Employee (“eligible HCE”)** means an eligible employee who is a Highly Compensated Employee.
- (c) An **eligible Nonhighly Compensated Employee (“eligible NHCE”)** means an eligible employee who is not a Highly Compensated Employee.
- (d) **Contribution percentage** means the ratio (calculated separately for each eligible employee) of:
  - (i) the total amount, for the Plan Year, of Employer contributions credited to the eligible employee’s Employer Matching Account excluding:
    - (A) any Employer matching contributions used in determining the deferral percentage under Section 2.1.1(d)(i) of this Appendix, and
    - (B) any Employer matching contributions of eligible HCEs that are forfeited pursuant to Sections 1.1.6 or 2.2.5 of this Appendix,and including, if the Committee elects, all or a portion of the Employer contributions credited to the eligible employee’s Retirement Savings Account and, if applicable, Roth Account, provided that the 401(k) compliance testing under Section 2.1 of this Appendix is satisfied both with and without exclusion of such Employer contributions, to
  - (ii) the eligible employee’s compensation, as defined below for the portion of such Plan Year that the employee is an eligible employee.  
For this purpose, Employer contributions will be considered made in the Plan Year if they are allocated as of a date during such Plan Year and are delivered to the Trustee within twelve (12) months after the end of such Plan Year.
- (e) **Compensation** means compensation for services performed for the Employer defined as “§ 415 compensation” in Appendix A to this Plan Statement. Notwithstanding the definition of “§ 415 compensation” in Appendix A to this Plan Statement, compensation shall always be determined on a cash (and not on an accrual) basis and compensation shall be determined on a Plan Year basis (which is not necessarily the same as the limitation year). Except as provided in Section 3.1.2(b) of this Appendix, compensation for purposes of this Section 2 shall be limited to the portion of such Plan Year that the employee is an eligible employee. An eligible employee’s

compensation for a Plan Year shall not exceed the limit on annual compensation under Section 401(a)(17) of the Code, which is Two Hundred Forty-Five Thousand Dollars (\$245,000) for 2009 (as adjusted under the Code for cost-of-living increases).

- (f) **Average contribution percentage** means, for a specified group of eligible employees for the Plan Year, the average of the contribution percentages for all eligible employees in such group.

3.1.2. **Special Rules.** For purposes of this Section 3.1, the following special rules apply:

- (a) **Rounding.** The contribution percentage of each eligible employee and the average contribution percentage for each group of eligible employees shall be calculated to the nearest one-hundredth of one percent.
- (b) **HCEs Eligible to Participate in Multiple Plans.** The contribution percentage of any eligible HCE who is eligible to participate in any other plan of the Employer and Affiliates to which nondeductible voluntary contributions and Employer matching contributions are made on behalf of the eligible HCE shall be equal to the ratio of:
- (i) the sum of all such nondeductible voluntary contributions and Employer matching contributions, and if used to determine the contribution percentage of eligible employees, Employer contributions made pursuant to a deferral election or qualified nonelective contributions (within the meaning of Section 401(m)(4)(C) of the Code), or both, under all such plans for the Plan Year, to
  - (ii) the eligible HCE's compensation (as defined in Section 3.1.1 of this Appendix) for the entire Plan Year.

If an eligible HCE participates in two or more plans of the Employer and all Affiliates that have different plan years, all nondeductible voluntary contributions and Employer matching contributions (and, if used to determine the contribution percentage of eligible employees, Employer contributions made pursuant to a deferral election or qualified nonelective contributions, or both) made during the Plan Year under all such plans (other than those that may be permissively aggregated) shall be aggregated. Notwithstanding the foregoing, certain plans shall be treated as separate if mandatorily disaggregated pursuant to Section 1.401(m)-1(b)(4) of the Income Tax Regulations.

(c) **Disproportionate Contributions for NHCEs Not Taken into Account.** Employer matching contributions shall not be taken into account in determining the contribution percentage of any eligible NHCE to the extent such matching contributions exceed the greater of:

- (i) Five percent (5%) of the eligible NHCE's Recognized Compensation for such Plan Year,
- (ii) the eligible NHCE's elective (pre-tax and Roth) contributions for such Plan Year, or
- (iii) the product of (A) multiplied by (B), where (A) and (B) are:
  - (A) two (2); and
  - (B) the Plan's representative matching rate (as defined below) multiplied by the eligible NHCE's elective (pre-tax and Roth) contributions for the Plan Year.

For purposes of Section 3 of this Appendix, the "Plan's representative matching rate" means, for any eligible NHCE for the Plan Year, the greater of:

- (i) the lowest matching rate (as defined below) for any eligible NHCE among a group of eligible NHCEs that consists of one-half (1/2) of all eligible NHCEs in the Plan for the Plan Year who made elective contributions for the Plan Year, or
- (ii) the lowest matching rate (as defined below) for all eligible NHCEs in the Plan who are employed by the Employer on the last day of the Plan Year and who made elective contributions for the Plan Year.

For purposes of Section 3 of this Appendix, the "matching rate" means the ratio (calculated separately for each eligible NHCE) of:

- (i) the total amount, for the Plan Year, of Employer contributions credited to the eligible NHCE's Employer Matching Account, to
- (ii) the total amount, for the Plan Year, of elective contributions credited to the eligible NHCE's Retirement Savings Account and, if applicable, Roth Account.

If, however, the matching contribution is not the same for all levels of elective (pre-tax and Roth) contributions for an eligible NHCE, such employee's matching rate shall be determined assuming that the employee's elective (pre-tax and Roth) contributions for the Plan Year are equal to six percent (6%) of the employee's Recognized Compensation for the Plan Year.

**(d) Permissive Aggregation.** If this Plan satisfies the requirements of Sections 401(m), 401(a)(4) or 410(b) of the Code only if aggregated with one or more other plans, or if one or more other plans satisfy the requirements of such sections of the Code only if aggregated with this Plan, then this Section 3.1 shall be applied by determining the average contribution percentage of eligible employees as if all such plans were a single plan. Plans may be aggregated in order to satisfy Section 401(m) of the Code only if they have the same Plan Year and they use the same 401(m) testing method.

**3.1.3. The 401(m) Tests-Current Year Testing Method.** Notwithstanding the foregoing provisions, at least one of the following two tests must be satisfied for each Plan Year:

**Test 1:** The average contribution percentage for the group of eligible HCEs for the current Plan Year is not more than the average contribution percentage for the group of eligible NHCEs for the current Plan Year multiplied by one and twenty-five hundredths (1.25).

**Test 2:** The excess of the average contribution percentage for the group of eligible HCEs for the current Plan Year over the average contribution percentage for the group of eligible NHCEs for the current Plan Year is not more than two (2) percentage points, and the average contribution percentage for the group of eligible HCEs for the current Plan Year is not more than the average contribution percentage for the group of eligible NHCEs for the current Plan Year multiplied by two (2).

The Committee may elect to substitute the average contribution percentage for the group of all eligible NHCEs for the preceding Plan Year for the average contribution percentage for the group of all other eligible NHCEs for the current Plan Year in Tests 1 and 2 above (*i.e.*, elect the prior year testing method) only if:

- (a) the Plan has used the current year testing method for each of the five (5) preceding Plan Years (or if lesser, the number of Plan Years the Plan has been in existence, including years in which the Plan was a portion of another plan); or
- (b) as a result of a merger or acquisition described in Section 410(b)(6)(C)(i) of the Code, the Employer maintains this Plan, which uses the current year testing method, and another plan, which uses the prior year testing, and the Committee changes this Plan's testing method to the prior year testing method within the transition period described in Section 410(b)(6)(C)(ii) of the Code.

**3.1.4. Preventative Action Prior to Plan Year End.** If the Committee determines that neither of the tests described in Section 3.1.3 will be satisfied (or may not be satisfied) for a Plan Year, then during such Plan Year, the Committee may from time to time establish (and modify) maximums for Employer matching contributions of eligible HCEs that are less than the contributions which would otherwise be permitted or provided. No Employer matching contributions shall be made in excess of such maximums after the date such maximums are effective. The Committee shall prescribe rules concerning such modifications, including the frequency of applying the tests designed in Section 3.1.3 and the commencement and termination dates for any modifications.

**3.2. Distribution of Excess Aggregate Contributions.**

**3.2.1. In General.** Notwithstanding any other provision of the Plan Statement, excess aggregate contributions, plus any income and minus any loss allocable thereto, shall be distributed no later than the last day of the following Plan Year to eligible HCEs as determined in this Section.

**3.2.2. Determining Excess Aggregate Contributions.** For purposes of this Section, excess aggregate contributions shall mean, with respect to any Plan Year, the excess of:

- (a) the aggregate amount of contributions taken into account in computing the average contribution percentage of eligible HCEs for such Plan Year, over
- (b) the maximum amount of such contributions permitted by the Section 401(m) tests described in Section 3.1 of this Appendix. Such maximum amount of contributions shall be determined by reducing (not distributing) eligible HCEs' contributions as follows:
  - (i) The Employer matching contributions for the eligible HCE who has the highest contribution percentage shall be reduced by the amount required to cause such eligible HCE's contribution percentage to equal the next highest contribution percentage of an eligible HCE.

- (ii) If neither of the tests is satisfied after such reduction, the Employer matching contributions for eligible HCEs who then have the highest contribution percentage (including those reduced under (i) above) shall be reduced by the amount required to cause such eligible HCEs' contribution percentage to equal the next highest contribution percentage of an eligible HCE.
- (iii) If neither of the tests is satisfied after such reductions, this method of reduction shall be repeated one or more additional times until one of the tests is satisfied.

**3.2.3. Distribution of Excess Aggregate Contributions.** Excess aggregate contributions, plus any income and minus any loss allocable thereto, shall be distributed from the eligible HCE's Employer Matching Account. If the excess aggregate contributions exceed the amount of contributions credited to the eligible HCE's Employer Matching Account for such Plan Year, then the remaining excess aggregate contributions, plus any income and minus any loss allocable thereto, shall be distributed from the eligible HCE's Retirement Savings Account and, if applicable, Roth Account but only if elective (pre-tax and Roth) contributions are used to determine the contribution percentage under Section 3.1.1(d) of this Appendix for such Plan Year. The amount of excess aggregate contributions to be allocated and distributed on behalf of each eligible HCE for the Plan Year shall be equal to the amount of reduction determined as follows:

- (a) The Employer matching contributions of the eligible HCE who has the highest dollar amount of such contributions shall be reduced by the amount required to cause such eligible HCE's contributions to equal the next highest dollar amount received by eligible HCEs.
- (b) If any excess aggregate contributions remain after performing (a), then the eligible HCEs who have the next highest dollar amount of Employer matching contributions (including those reduced under (a) above) shall be reduced by the amount required to cause such eligible HCEs' contributions to equal the next highest dollar amount received by eligible HCEs.
- (c) If any excess aggregate contributions remain after performing (a) and (b), this method of reduction shall be repeated one or more additional times until no excess aggregate contributions remain.

Provided, however, if the total amount of reduction determined in (a) through (b) would be greater than the amount of excess aggregate

contributions, then the final reduction amount shall be decreased so that the total amount of reductions equals the amount of excess aggregate contributions.

- 3.2.4. Determination of Income or Loss.** The excess aggregate contributions to be distributed to any eligible HCE shall be adjusted for income or loss for the Plan Year (but not the gap period). Unless the Committee and the recordkeeper for the Plan agree otherwise in writing, the income or loss allocable to excess aggregate contributions to be distributed shall be determined by multiplying the income or loss allocable to the eligible HCE's Employer matching contributions to the extent used to determine the eligible HCE's contribution percentage under Section 3.1.1(d) of this Appendix, and if used to determine an eligible HCE's contribution percentage under Section 3.1.1(d) of this Appendix, elective (pre-tax and Roth) contributions for the Plan Year by a fraction, the numerator of which is the excess aggregate contributions to be distributed to the eligible HCE for the Plan Year and the denominator of which is the sum of the eligible HCE's account balances attributable to Employer matching contributions and such elective (pre-tax and Roth) contributions on the last day of the Plan Year, without regard to any income or loss occurring during such Plan Year.
- 3.2.5. Orphaned Matching Contributions.** If elective (pre-tax and Roth) contributions treated as excess aggregate contributions are distributed pursuant to this Section 3.2 of the Plan Statement, applicable matching contributions under Section 3.3 of the Plan Statement shall be treated as forfeitures and reallocated as provided in Section 6.2 of the Plan Statement.

**3.3. Section 401(m) Curative Contribution.**

- 3.3.1. Amount and Eligibility.** If neither of the section 401(m) tests set forth in Section 3.1 of this Appendix has been satisfied and a distribution of “excess aggregate contributions” has not been made pursuant to Section 3.2 of this Appendix, then the Employer shall make an additional matching contribution for that Plan Year. Forfeitures shall not be included in this allocation. Only those Participants who were eligible NHCEs for that Plan Year and who were entitled to receive an Employer matching contribution shall share in such allocation. This allocation shall be made first to the Participant with the least amount of compensation and then, in ascending order of compensation, to other Participants. The amount of the Employer matching contribution to be so allocated shall be that amount required to cause the Plan to satisfy either of the Section 401(m) tests set forth in Section 3.1 of this Appendix for the Plan Year; provided, however, that in no case shall any amounts be so allocated to cause a Participant’s Employer matching contributions for such Plan Year to exceed the maximum amount permitted to be taken into account in determining the eligible NHCE’s contribution percentage pursuant to Section 3.1.2(c) of this Appendix.
- 3.3.2. Crediting to Account.** The Employer matching contribution which is so allocated to a Participant shall be allocated to that Participant’s Employer Matching Account for the Plan Year with respect to which it is made and, for the purposes of Section 4 of the Plan Statement, shall be credited as soon as practicable after it is received by the Trustee.



**ELEVENTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

WHEREAS, Entegris, Inc. (the "Principal Sponsor") has heretofore established and maintains a 401(k) and profit sharing plan which was amended and restated in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended (collectively, the "Plan Statement"); and

WHEREAS, The Principal Sponsor has reserved to itself the power to make further amendments of the Plan Statement.

NOW, THEREFORE, The Plan Statement is hereby amended as follows:

1. **MATCHING CONTRIBUTION REINSTATEMENT. Effective as of January 1, 2010 or as soon thereafter as administratively and legally feasible, Sections 3.3.1 and 3.3.2 of the Plan Statement shall be amended to read in full as follows:**

3.3.1. **Amount and Eligibility.** The Employer shall contribute to the Trustee for deposit in the Fund and for crediting to the Participant's Employer Matching Account an amount which will equal one hundred percent (100%) of the amount of the first three percent (3%) and fifty percent (50%) of the amount of the next two percent (2%) of reduction in Recognized Compensation for each pay period which was agreed to by the Participant pursuant to a Retirement Savings Election. Such Employer matching contributions shall be delivered to the Trustee for deposit in the Fund not later than the time prescribed by federal law (including extensions) for filing the federal income tax return of the Employer for the taxable year in which the Plan Year ends.

3.3.2. **Matching Contributions Determined on an Annual Basis.** If the matching contributions made with respect to any Participant for the Plan Year are less than one hundred percent (100%) of the first three percent (3%) and fifty percent (50%) of the amount of the next two percent (2%) of reduction in Recognized Compensation for such Plan Year, then the Employer shall make an additional matching contribution to the Plan so that the total matching contributions with respect to such Participant for such Plan Year will equal one hundred percent (100%) of the first three percent (3%) and fifty percent (50%) of the amount of the next two percent (2%) of the Participant's reduction in Recognized Compensation for such Plan Year.

2. **CONFORMING CHANGES. Wherever the amount of Employer Matching Contributions is set forth in the Plan Statement, such language shall be amended to read in full as follows: "one hundred percent (100%)**

of the first three percent (3%) and fifty percent (50%) of the amount of the next two percent (2%) of reduction in Recognized Compensation for such Plan Year.”

3. SAVINGS CLAUSE. Save and except as herein expressly amended, the Plan Statement shall continue in full force and effect.

**TWELFTH AMENDMENT  
OF  
ENTEGRIS, INC.  
401(k) SAVINGS AND PROFIT SHARING PLAN  
(2005 Restatement)**

Entegris, Inc., a Delaware corporation, has heretofore established and maintains a profit sharing plan (the "Plan") which, in most recent amended and restated form, is embodied in a document effective August 5, 2005, and entitled "ENTEGRIS, INC. 401(k) SAVINGS AND PROFIT SHARING PLAN (2005 Restatement)," as amended by eleven (collectively, the "Plan Statement"). The Plan Statement is hereby further amended in the following respects:

**1. PPA-NOTICE REGARDING CONSEQUENCES OF FAILING TO DEFER RECEIPT OF DISTRIBUTION. Effective for all distribution made on or after January 1, 2007, Section 7.5.1 of the Plan Statement shall be amended by adding the following sentence after the first sentence of such Section:**

For all notices given in Plan Years beginning on or after January 1, 2007, such notification shall also include a description of the consequences of failing to defer receipt of a distribution.

**2. PPA-NON SPOUSE BENEFICIARY ROLLOVERS AND AFTER-TAX CONTRIBUTIONS AND ROTH CONTRIBUTIONS. Effective for all benefit payments commencing on or after January 1, 2007, Section 7.5.2 of the Plan Statement shall be amended by deleting the last sentence Section 7.5.2(b) without replacement and by adding thereto the following new paragraphs (d) and (e):**

- (d) **After-Tax Contributions and Roth Contributions.** To the extent a distribution consists in part of after-tax employee contributions which are not includible in gross income, such portion may be transferred only to an individual retirement account or annuity described in section 408(a) or 408(b) of the Code, or to a qualified trust described in section 401(a) of the Code or to an annuity contract described in section 403(b) of the Code, if such trust or contract provides for separate accounting for the portion of such distribution which is includible in gross income and the portion of such distribution which is not so includible. To the extent a distribution consists of Roth contributions, such portion may be transferred only to a Roth IRA described in section 408A of the Code, or to another designated Roth account described in section 402A of the Code that agrees to separately account for amounts so transferred, including separately accounting for the portion of such distribution which is includible in gross income and the portion of such distribution which is not so includible.
- (e) **Special Rule For Nonspouse Beneficiaries.** A distributee who is a Beneficiary and who is not the surviving spouse of a Participant or an alternate payee may elect, at the time and the manner prescribed by the

Committee, to have all or any portion of such distributee's benefit paid directly in a trustee-to-trustee transfer to an individual retirement account or annuity described in sections 408(a) or (b) of the Code, which is treated as an inherited individual retirement account or annuity within the meaning of section 408(d)(3)(C) of the Code. Any distribution to a nonspouse Beneficiary which is payable prior to January 1, 2010, shall not be subject to the direct rollover requirements of section 401(a)(31) of the Code and the notice requirements of section 402(f) of the Code. Any distribution to a nonspouse Beneficiary which is payable on or after January 1, 2010, shall be subject to the direct rollover requirements of section 401(a)(31) of the Code and the notice requirements of section 402(f) of the Code.

**3. PPA-ROLLOVER TO ROTH IRA. Effective for all benefit payments commencing on or after January 1, 2008, Section 7.5.2 of the Plan Statement shall be amended by adding the following new paragraph (f):**

- (f) **Qualified Rollover Contribution to Roth IRA.** A distributee may elect to have all or a portion of an eligible rollover distribution rolled over to a Roth IRA described in section 408A of the Code. However, for distributions made before January 1, 2010, the distributee shall not be eligible to make a qualified rollover contribution to a Roth IRA if the distributee's adjusted gross income exceeds One Hundred Thousand Dollars (\$100,000) or the distributee is a married individual filing a separate return.

**4. PPA-TOP HEAVY PROVISION. Effective for Plan Years beginning on or after January 1, 2008, Section 1.10(j) of Appendix B to the Plan Statement shall be amended to read in full as follows:**

- (j) A plan shall not be a top heavy plan if it consists solely of (i) a cash or deferred arrangement which meets the requirements of section 401(k)(12) or section 401(k)(13) of the Code, and (ii) matching contributions which meet the requirements of section 401(m)(11) or section 401(m)(12) of the Code. If, but for the preceding sentence, a plan would be treated as a top heavy plan because it is a member of an aggregation group which is a top heavy group, contributions under the Plan may be taken into account in determining whether any other plan in the group meets the requirements of Section 3.3.

5. SAFE HARBOR PLAN FOR 2010. Effective for Plan Years beginning on or after January 1, 2010, Section 2 of Appendix D to the Plan Statement shall be amended as follows:

SECTION 2

SECTION 401(k) COMPLIANCE

This Plan satisfies the nondiscrimination requirements of section 401(k) of the Code using the alternative method set forth in section 401(k)(12) of the Code.

6. SAFE HARBOR PLAN FOR 2010. Effective for Plan Years beginning on or after January 1, 2010, Section 3 of Appendix D to the Plan Statement shall be amended as follows:

SECTION 3

SECTION 401(m) COMPLIANCE

This Plan satisfies the nondiscrimination requirements of section 401(m) of the Code using the alternative method set forth in section 401(m)(11) of the Code.

7. PPA-NOTICE REGARDING CONSEQUENCES OF FAILING TO DEFER RECEIPT OF DISTRIBUTION. Effective for all distribution made on or after January 1, 2007, Section 4.1 of Appendix E to the Plan Statement shall be amended by adding the following sentence after the first sentence of such Section:

For all notices given in Plan Years beginning on or after January 1, 2007, such notification shall also include a description of the consequences of failing to defer receipt of a distribution.

8. INTEREST RATE ON LOANS. Effective for loans made on or after February 1, 2010, Section 7.6.6(b) of the Plan Statement shall be amended to read in full as follows:

- (b) **Interest Rate.** The interest rate on any loan shall be equal to the prime rate (the base rate on corporate loans at large United States money center commercial banks) as reported by Reuters or any comparable successor rate so reported on the first business day of the calendar month in which the loan is granted plus one percent (1%).

9. RECOGNIZED COMPENSATION. Effective for clarifying the Principal Sponsor's interpretation of the definition of Recognized Compensation, Section 1.1.32(b) of the Plan Statement shall be amended to read as follows:

- (b) **Excluded Items.** In determining a Participant's Recognized Compensation there shall be excluded all of the following: (i) reimbursements or other expense allowances (including all living and other expenses paid on account of the Participant being on foreign assignment), (ii) welfare and fringe benefits (both cash and noncash)

including third-party sick pay (*i.e.*, short-term and long-term disability insurance benefits), income imputed from insurance coverages and premiums, employee discounts and other similar amounts, payments for vacation or sick leave accrued but not taken, final payments on account of termination of employment (*i.e.*, severance payments), except that final payments on account of settlement for accrued but unused paid time off shall be taken into account in determining a Participant's Recognized Compensation, (iii) moving expenses, (iv) deferred compensation (both when deferred and when received), and (v) stock-based compensation of any kind, including, but not limited to, amounts realized from the exercise of a non-qualified stock option or restricted stock held by an employee that becomes freely transferable or is no longer subject to a substantial risk of forfeiture.

**10. SAVINGS CLAUSE. Save and except as hereinabove expressly amended, the Plan Statement shall continue in full force and effect.**

**AMENDMENT #1**  
**to**  
**AMENDED AND RESTATED**  
**SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN**  
**FOR KEY SALARIED EMPLOYEES OF**  
**ENTEGRIS, INC.**

**INTRODUCTION**

This document amends the Amended and Restated Supplemental Executive Retirement Plan for Key Salaried Employees of Entegris, Inc., which was originally established effective April 1, 2001 by Mykrolis Corporation, a predecessor to the Company, and which was assumed by the Board on August 10, 2005 and amended and restated by the Board on July 30, 2008.

The purpose of the Plan is to provide certain key salaried employees of the Employer with the opportunity to defer a portion of their compensation on an unfunded, nonqualified basis as hereinafter provided and to provide benefits to such employees that are supplemental to the benefits provided under the Savings Plan.

The Amended and Restated Plan, dated July 30, 2008, was intended *inter alia* to conform the Plan to the requirements of Section 409A, including the transition rules and exemptive relief provisions thereunder, and shall be construed consistent with that intent. Notwithstanding the foregoing, neither the Company nor any of its officers or directors, nor any other person charged with administrative responsibilities under the Supplemental Plan, shall be liable to any employee or former employee of the Company, or to any spouse or other beneficiary of any such employee or former employee, by reason of the failure of any benefit hereunder to comply with the requirements of Section 409A.

For purposes of compliance with Section 409A, the Supplemental Plan consists of two parts: (i) amounts deferred on behalf of a Participant that were earned and vested on or after January 1, 2005, including all income, gains and losses credited or charged with respect thereto ("Section 409A deferrals") and (ii) amounts deferred on behalf of a Participant that were earned and vested on or before December 31, 2004 (including all income, gains and losses credited or charged with respect thereto) ("grandfathered deferrals"). With respect to Section 409A deferrals, the Supplemental Plan is intended to comply with the requirements of Section 409A and shall be interpreted and administered in a manner consistent with such requirements. With respect to grandfathered deferrals, the Plan is intended to be grandfathered for purposes of Section 409A and therefore exempt from Section 409A.

This Amendment #1 is intended to consolidate the provisions relating to the grandfathered deferrals into a single document with the provisions governing the 409A deferrals and to clarify certain administrative responsibilities. The terms of this Amendment #1 are to be effective as of January 1, 2009 except as indicated otherwise herein. Neither the Plan nor the provisions of this Supplemental Plan relating to grandfathered deferrals effect any material modification of the grandfathered deferrals within the meaning of Section 409A after October 3, 2004, although the Company reserves the right to amend grandfathered deferrals in the future to the extent provided herein. The rights of a Participant in the Plan who separated from service of the Employer on

or prior to December 31, 2008 shall be governed by the terms of the Plan, including operational terms, as in effect on the date of such separation from service and in accordance with the requirements of Section 409A, to the extent applicable.

## SECTION 1 DEFINITIONS

The following terms when used in this Supplemental Plan with initial capital letters shall have the meanings assigned to them below. Except where the context otherwise requires, words imparting the singular number shall include the plural number and vice versa, words denoting any gender shall include all genders and words denoting persons shall include bodies corporate and vice versa:

- 1.1. **“Administrator”** means the Management Development & Compensation Committee of the Board.
- 1.2. **“Administrative Committee”** means a committee comprised of not less than three (3) employees of the Company or other persons as shall, from time to time, be appointed by the Administrator. The initial Administrative Committee shall be comprised of those employees holding the offices with the Company listed in **Appendix A** hereto.
- 1.3. **“Board”** means the Board of Directors of Entegris, Inc., as from time to time in office.
- 1.4. **“Code”** means the Internal Revenue Code of 1986, as amended from time to time. Reference to any section or subsection of the Code includes reference to any comparable or succeeding provisions of any legislation which amends, supplements or replaces such section or subsection.
- 1.5. **“Company”** means Entegris, Inc., a Delaware corporation.
- 1.6. **“Employer”** means the Company, together with any subsidiary or affiliated corporation that (i) together with the Company would be treated as a single “employer” for purposes of Treas. Regs. § 1.409A-1(h)(3) and (ii) the Board determines to add to this Supplemental Plan.
- 1.7. **“Participant”** means a key salaried employee of the Employer who (i) is determined by the Administrator to qualify as a “highly compensated or management” employee for purposes of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA and (ii) is designated by the Administrator to receive benefits under this Supplemental Plan.
- 1.8. **“Plan”** means the Supplemental Executive Retirement Plan for Key Salaried Employees of Entegris, Inc. as in effect on December 31, 2004.
- 1.9. **“Savings Plan”** means the Entegris, Inc. 401(k) Savings and Profit Sharing Plan (2005 Restatement) , as it may be amended or restated from time to time.
- 1.10. **“Section 409A”** means Section 409A of the Code.
- 1.11. **“Specified Employee”** means a Participant, if (i) at the date of such Participant’s separation from service with the Employer within the meaning of Treas. Regs. § 1.409A-



1(h); the Company (or any other corporation forming part of the Employer) is a corporation any stock of which is publicly traded on an established securities market or otherwise, and (ii) the Participant is or was a "key employee" (determined under Section 416(i)(1)(A)(i), (ii) or (iii) of the Code, applied in accordance with the regulations thereunder and disregarding Section 416(i)(5) of the Code) at any time during (A) if the date of separation from service is April 1 through December 31, the preceding calendar year, or (B) if the date of separation from service is January 1 through March 31, the second calendar year preceding the calendar year in which the separation from service occurs (e.g., 2007 for a separation from service occurring January 1 through March 31 of 2009).

- 1.12. **"Supplemental Account"** means, for each Participant, the account under this Supplemental Plan to which contributions hereunder shall be credited in accordance with the provisions hereof. In the discretion of the Administrative Committee Supplemental Accounts may be subdivided for supplemental Participant contributions under Section 2.1, supplemental employer matching contributions under Section 2.2 supplemental employer discretionary contributions under Section 2.3 and other Employer credits under Section 2.4.
- 1.13. **"Supplemental Plan"** means this Amended and Restated Supplemental Executive Retirement Plan for Key Salaried Employees of Entegris, Inc. as amended by this Amendment #1 and by all subsequent amendments hereto.

## SECTION 2 SUPPLEMENTAL SAVINGS PLAN BENEFITS

- 2.1. **Supplemental Participant Contributions.** Beginning January 1, 2005, a Participant may elect as provided in Section 3 to defer hereunder a portion or percentage of his or her gross compensation for any calendar year (prior to any deferrals under the Savings Plan, this Supplemental Plan, or any other nonqualified deferred compensation plan of the Company).
- 2.1.1. **Pre-2005 Supplemental Participant Contributions.** If, prior to January 1, 2005, contributions to the Savings Plan on behalf of a Participant were limited by the application of the limits described in Code Sections 401(a)(17) and 415 and/or a Participant made compensation deferrals pursuant to this Supplemental Plan or to any other nonqualified deferred compensation plan of the Company, the Company shall, if it has not already done so, credit to the Participant's Supplemental Plan Account an amount equal to the excess of (a) over (b), where (a) is the amount which would have been contributed to the Savings Plan in the absence of the limits described in Code Sections 401(a)(17) and 415 and any compensation deferrals under this Supplemental Plan or any other nonqualified deferred compensation plan of the Company, and (b) is the amount actually contributed under the Savings Plan.
- 2.2. **Supplemental Employer Matching Contributions.** Beginning January 1, 2006, the Company shall credit to the Supplemental Account of each Participant who has elected to participate in pre-tax deferrals under the Savings Plan (taking into account any limitations imposed under the Savings Plan to comply with the qualification requirements of the

Code) an amount equal to the amount of employer matching contributions appropriate to the level of such Participant pre-tax deferrals and which would have been made to the Savings Plan in the absence of the limitations of Code Section 401(a)(17) and Code Section 415 minus the amount of employer matching contributions actually made to the Savings Plan.

**2.2.1. Pre-2006 Supplemental Employer Matching Contributions.** If, prior to January 1, 2006, a Participant made supplemental Participant contributions pursuant to Section 2.1.1 above, the Company shall, if it has not already done so, credit to his Supplemental Account an amount equal to the employer matching contributions appropriate to the level of such Participant contributions and which would have been made pursuant to the Savings Plan if the Participant's supplemental Participant contributions had been made pursuant to the Savings Plan, without regard to the nondiscrimination requirements of Code Section 401(m).

**2.3. Supplemental Employer Discretionary Contributions.** Beginning January 1, 2006, the Company, in its sole discretion, may credit employer discretionary contributions to the Supplemental Account of each Participant in an amount and on an annual or such other basis as the Company may determine. The Company may, but is not obligated to, determine the amount of such employer discretionary contributions by considering the amount of employer discretionary contributions which would have been made to the Savings Plan on behalf of a Participant in the absence of the limitations of Code Section 401(a)(17), Code Section 415, the nondiscrimination requirements of Code Section 401(m) if, in addition to the deferrals for employer discretionary contributions actually made to the Savings Plan, the employer discretionary contributions under this Supplemental Plan had been made to the Savings Plan, minus the amount of employer discretionary contributions actually made to the Savings Plan on behalf of such Participant.

**2.3.1. Pre-2006 Supplemental Employer Discretionary Contributions.** If, prior to January 1, 2006, Employer Discretionary Contributions to the Savings Plan on behalf of a Participant were limited by the application of the limits described in Code Sections 401(a)(17) and 415 and/or a Participant made compensation deferrals pursuant to this Supplemental Plan or to any other nonqualified deferred compensation plan of the Company, the Company shall, if it has not already done so, credit to the Participant's Supplemental Plan Account an amount equal to the excess of (a) over (b), where (a) is the amount which would have been contributed to the Savings Plan in the absence of the limits described in Code Sections 401(a)(17) and 415 and any compensation deferrals under this Supplemental Plan or any other nonqualified deferred compensation plan of the Company, and (b) is the amount actually contributed under the Savings Plan.

**2.4. Other Employer Credits.** The Company in its sole discretion may credit a discretionary amount to the Supplemental Accounts of one or some Participants, in such an amount and at such time, and subject to such other terms and conditions as the Company may determine in its sole discretion.

### SECTION 3 DEFERRAL ELECTION

- 3.1. **In General.** Each deferral under Section 2.1 shall be made by the Participant's delivery to the Administrative Committee of a deferral election, on such form or forms as the Administrative Committee may determine in its discretion, on or before the date specified by the Administrative Committee, which date shall in all events (except as provided in 3.2 below) be, or fall prior to:
- (i) in the case of any bonus that qualifies as "performance-based compensation" within the meaning of Treas. Regs. § 1.409A-1(e), the date that is six (6) months before the end of the performance period, but only if the Participant has been in continuous employment with the Employer since the later of the beginning of the performance period or the date the performance criteria are established and only if, on the date of the deferral election, the compensation has not become readily ascertainable (as determined in accordance with Treas. Regs. § 1.409A-2(a)(8));
  - (ii) in every other case, the last day of the calendar year preceding the calendar year in which are to be performed the services to which the deferred compensation relates.
- Each election made under this 3.1 shall become irrevocable in accordance with such rules as the Administrative Committee may establish but not later than the election deadline specified in (i) or (ii) above, as applicable. Notwithstanding the above, the Administrative Committee may permit a Participant to make a deferral election without meeting the requirements of this Section 3.1, pursuant to such procedures as the Administrative Committee may determine in its discretion, to the extent permitted by transition guidance issued under Section 409A of the Code.
- The Administrative Committee may impose a minimum deferral amount for anyone electing to participate in this Supplemental Plan.
- 3.2. **First Year of Participation.** Notwithstanding Section 3.1 above, an individual who first becomes eligible to participate in this Supplemental Plan during the course of a calendar year may elect to defer a specified portion or percentage of his gross compensation in respect of services to be performed for the remainder of the year by delivering to the Administrative Committee an irrevocable deferral election within thirty (30) days of first becoming eligible. An individual who already participates or is eligible to participate in (including an individual who has any entitlement, vested or unvested, to payments under) any other nonqualified deferred compensation plan that would be required to be aggregated with this Supplemental Plan for purposes of Treas. Regs. § 1.409A-1(c)(2) shall not be treated as eligible for the mid-year election rules of this Section 3.2 with respect to this Supplemental Plan, even if he had never previously been eligible to participate in this Supplemental Plan.
- 3.3. **Form of Election.** Each deferral election shall be made in writing on a form prescribed by the Administrative Committee. To the extent consistent with Section 409A, the Administrative Committee may condition the effectiveness of any election upon the delivery by the Participant of such other form or forms as the Administrative Committee may prescribe.

#### SECTION 4 INVESTMENT DIRECTION

Participants shall be permitted, pursuant to such procedures as the Administrative Committee may determine in its discretion, to designate what percentage of all amounts credited to the Participant's Supplemental Account in accordance with Section 2 above will be invested in the various investment options made available under the Savings Plan. Notwithstanding the foregoing, nothing herein shall obligate the Company, the Administrator or the Administrative Committee to make the same investment options available under this Supplemental Plan as are available under the Savings Plan and the Administrative Committee may change such investment options at any time in its sole discretion.

#### SECTION 5 DISTRIBUTIONS AND LOANS

- 5.1. **Distribution of Section 409A Deferrals.** All payments of benefits to Participants and/or their designated beneficiaries under this Supplemental Plan with respect to Section 409A deferrals shall be in cash in the form of a single lump sum paid within 90 days following the Participant's separation from the service of the Employer within the meaning of Treas. Regs. § 1.409A-1(h); *provided, however*, that in the case of a Participant who is a Specified Employee at the date he or she separates from the service of the Employer, payment shall be made on the date that is six (6) months following the date of such separation.
- 5.2. **Distribution of Grandfathered Deferrals.** All payments of benefits to Participants and/or their designated beneficiaries with respect to grandfathered deferrals under this Supplemental Plan shall be made in any of the three forms set forth below; the particular form to be selected by the Administrative Committee in its sole discretion after giving due consideration to the desires of the Participant and/or his or her designated beneficiary, communicated to the Administrative Committee at least six (6) months prior to the date on which any such benefit payment is to commence:
- i) A lump sum payment;
  - ii) The payment of a life annuity;
  - iii) In five, ten or fifteen equal annual installments. (Equal shall mean dividing the account balance by the number of years remaining before making the annual installment then due).
- Any unpaid balance shall remain in the Participant's Supplemental Account and shall be adjusted in the manner as provided for in Section 2 above.
- 5.3. **Distributions While Employed.** No distributions may be made to a Participant under the terms of this Supplemental Plan while the Participant is an employee of the Employer.
- 5.4. **Right of Offset.** If, at the time of payment hereunder, the Administrative Committee determines that the Participant to whom or on whose behalf payment is being made, for any reason, is indebted to the Company or to any affiliate or subsidiary of the Company or to the Savings Plan, the Administrative Committee shall be entitled, to the extent permitted under Section 409A of the Code, to offset such indebtedness, including any interest accruing thereon, against any payments otherwise due under the Supplemental Plan.

- 5.5. **Withholding.** The Company shall be entitled to withhold from payments due under the Supplemental Plan any and all taxes of any nature required by any government to be withheld from compensation paid to Participants.
- 5.6. **Loans.** No loans to Participants shall be permitted under the Supplemental Plan.
- 5.7. **Designation of Beneficiary(ies).** Each Participant shall designate in writing, on such form and subject to such conditions as the Administrative Committee shall prescribe (including, in the Administrative Committee discretion, spousal consent in the case of married Participants), a beneficiary or beneficiaries to receive any amounts remaining to be paid hereunder at the Participant's death; but if no such beneficiary designation is in effect at the time of the Participant's death, or if the Participant's beneficiary(ies) do(es) not survive the Participant, the Administrative Committee shall cause any such remaining benefits to be paid to the executor or administrator of the Participant's estate.

#### SECTION 6 VESTING

A Participant shall be vested at all times in his or her supplemental participant contributions made under Section 2.1 and in supplemental Employer matching contributions made under Section 2.2. A Participant shall be vested in his or her supplemental Employer discretionary contributions to the same extent that the Participant is vested in his or her Employer Profit Sharing Account under the Savings Plan. A Participant shall be vested in any credit made under Section 2.4 in the sole discretion of the Company.

#### SECTION 7 MISCELLANEOUS

- 7.1. **Amendment and Termination.**
- (1) The Board may at any time and from time to time, amend or terminate this Supplemental Plan, without the consent of any Participant or beneficiary, provided that no such amendment or termination shall, without the consent of the affected Participant, reduce the balance of any Participant's Supplemental Account below what it was immediately prior to the date of such termination or amendment
  - (2) Any amendment or termination of the Supplemental Plan shall become effective as to a Participant or beneficiary on the first day of the month following the effective date of the amendment or termination.
  - (3) The Administrative Committee shall have the authority to: (i) adopt, alter and repeal such rules and procedures for the administration of this Supplemental Plan and such rules and procedures shall have the same force and effect as if set forth at length herein as a part of the Supplemental Plan; (ii) to adopt alter and repeal such rules and procedures for the conduct of its own actions and proceedings; (iii) to prescribe the form for any election or notice to be made or given under the Supplemental Plan;

- (4) The Administrator shall have the authority to adopt such corrective amendments to this Supplemental Plan as may be necessary to comply with the provisions of Section 409A.
- (5) Upon termination of the Plan, payments hereunder shall be accelerated only to the extent permitted by Section 409A.
- 7.2. **No Contract of Employment.** The establishment of the Supplemental Plan or any modification thereof shall not give any Participant or other person the right to remain in the service of the Company or of any subsidiary or affiliate of the Company, and all Participants and other persons shall remain subject to discharge to the same extent as if the Supplemental Plan had never been adopted.
- 7.3. **Source of Funds.** All payments of benefits hereunder and all costs of administration of this Plan shall be paid in cash from the general funds of the Company, and no special or separate fund shall be required to be established or other segregation of assets required to be made to assure such payments. The Plan is intended to be a "pension plan" (within the meaning of Section 3(2) of ERISA) that is unfunded for ERISA and tax purposes and that qualifies for the exemptions described in ERISA Sections 201(2), 301(a)(3) and 401(a)(1).
- Nothing in this Section 7.3 shall be construed as prohibiting the Company from establishing, in its discretion, a bookkeeping account or reserve to meet its obligations hereunder and/or a so-called "rabbi trust" or similar grantor trust, and the Company may fund such trust for the purpose of providing benefits hereunder, so long as the funding of such a trust or account does not jeopardize the unfunded status of the Plan under ERISA or effective tax deferral under the Code. Except as provided in the preceding sentence, nothing contained in the Plan and no action taken pursuant to the provisions of this Plan shall create or be construed to create a trust of any kind, or a fiduciary relationship between the Company, the Administrator or the Administrative Committee and any employee or other person. To the extent that any person acquires a right to receive payments under the Plan, such right shall be no greater than the right of any unsecured general creditor of that person's employer or former employer.
- 7.4. **Tax Effects.** None of the Company, the Board, the Administrator, the Administrative Committee, and any firm, person, or corporation, represents or guarantees that any particular federal, state or local tax consequences will occur as a result of any Participant's participation in this Supplemental Plan; each Participant shall consult with his or her own advisors regarding the tax consequences of participation in this Supplemental Plan.
- 7.5. **Administration of the Supplemental Plan.** The Administrative Committee, subject to the supervision of the Administrator, shall have full power to interpret and administer this Supplemental Plan, to exercise all authority granted it under this Supplemental Plan and

determine the eligibility of any person for benefits hereunder and the amount of any such benefit, in its discretion. Without limiting the foregoing, the Administrative Committee shall have full discretionary power and authority, not inconsistent with the express provisions of the Supplemental Plan, to select those individuals who may participate in the Supplemental Plan; to determine their gross compensation eligible for deferral under the Supplemental Plan; to determine eligibility to commence receipt of benefits (including, without limitation, any determination as to the proper treatment of leaves of absence and other periods when an individual is not actively rendering service to the Employer); and otherwise to supervise the administration of the Supplemental Plan. Any discretionary action by the Administrative Committee under the Supplemental Plan that affects the rights or benefits under the Supplemental Plan of an individual who is a member of the Administrative Committee (other than an action of general applicability to all Participants) must be approved by the Administrator. The Administrative Committee shall establish claims procedures under the Supplemental Plan consistent with the requirements of Section 503 of the Employee Retirement Income Security Act of 1974, as amended. The Administrative Committee shall also have the authority to interpret and administer this Supplemental Plan as it relates to grandfathered deferrals or the rights of a Participant who separated from the service of the Employer on or prior to December 31, 2008.

- 7.6. **Entire Agreement; Successors.** This Supplemental Plan, including any subsequently adopted amendments, shall constitute the entire agreement or contract between the Company and any Participant regarding the Supplemental Plan. There are no covenants, promises, agreements, conditions or understandings, either oral or written, between the Company and any Participant relating to the subject matter hereof, other than those set forth in this Supplemental Plan. This Supplemental Plan and any amendment shall be binding on the parties hereto and their respective heirs administrators, trustees, successors and assigns, and on all designated beneficiaries of the Participant.
- 7.7. **Severability.** If any provision of this Supplemental Plan shall be held or deemed to be invalid, inoperative or unenforceable as applied to any particular case in any jurisdiction or jurisdictions, because of its conflicting with any constitution or statute or rule of law or public policy or for any other reason, such circumstances shall not have the effect of rendering the provision or provisions in question invalid, inoperative or unenforceable in any other jurisdiction or of rendering any other provision or provisions herein contained invalid, inoperative or unenforceable, but this Supplemental Plan shall be reformed and construed in any such jurisdiction or case as if such invalid, inoperative or unenforceable provision had been contained herein and such provision reformed so that it would be valid, operative and enforceable to the maximum extent permitted in such jurisdiction or in such case.
- 7.8. **Validation of the Supplemental Account Balances of Certain Participants.** Effective October 2006, the Supplemental Accounts of the Participants listed on **Appendix B** are, in accordance with the provisions of the Plan, increased to the amount set forth opposite each such Participant's name, together with the investment returns thereon as if such increased amounts had been invested as of such respective Adjustment Effective Dates.

IN WITNESS WHEREOF, the Company has caused this Amended and Restated Supplemental Plan to be executed by its duly authorized officer as of the 29<sup>th</sup> day of July, 2009.

ENTEGRIS, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

**APPENDIX A**

**Initial Members of the Administrative Committee:**

Chief Financial Officer  
Senior Vice President Human Resources  
Senior Vice President and General Counsel

**APPENDIX B**

**VALIDATION OF PARTICIPANT ACCOUNT BALANCES**

In accordance with Section 7.8 of the Supplemental Plan the Participant Account Balances of the Following Participants are increased to the respective balances set forth below:

<u>Participant Name</u>	<u>Increased Account Balance</u>
Fred Faulkner	\$ 2,531.31
Bertrand Loy	\$ 3,702.44
Jean-Marc Pandraud	\$ 2,204.01



## ENTEGRIS, INC.

2010 STOCK PLAN**SECTION 1. PURPOSE**

The purpose of the Entegris, Inc. 2010 Stock Plan (“the Plan”) is to: **(i)** assist the Company and its Affiliates in attracting, recruiting and retaining exceptionally qualified individuals to serve as employees, non-employee directors, consultants and/or advisors; **(ii)** provide incentives to such individuals which align with the interests of the Company’s stockholders; and **(iii)** to promote the success of the Company’s business. It is believed that by encouraging these individuals to acquire a proprietary interest in the growth and performance of the Company their efforts will be stimulated to achieve the Company’s long-term objectives.

**SECTION 2. DEFINED TERMS**

Exhibit A, which is incorporated into this Plan by reference, defines certain terms used in the Plan; other terms defined elsewhere in the Plan shall have the meaning provided at the location of definition.

**SECTION 3. ADMINISTRATION**

**3.1. Administrative Authority.** The Plan shall be administered by the Administrator. The Administrator shall have full power and authority, subject to the provisions of the Plan and to such orders or resolutions not inconsistent with the provisions of the Plan, as may from time to time be adopted by the Board, to:

- (i)** select the Employees, Directors and Consultants to whom Awards may from time to time be granted hereunder;
- (ii)** determine the type or types of Awards to be granted to each Participant hereunder;
- (iii)** determine the number of shares of Stock to be covered by each Award granted hereunder;
- (iv)** determine the terms and conditions, not inconsistent with the provisions of the Plan, of any Award granted hereunder;
- (v)** determine whether, to what extent and under what circumstances Awards may be settled in cash, Stock or other property;
- (vi)** determine whether, to what extent, and under what circumstances cash, Stock, other property and other amounts payable with respect to an Award made under the Plan shall be deferred either automatically or at the election of the Participant;
- (vii)** determine whether, to what extent, and under what circumstances any Award shall be forfeited, canceled or suspended;
- (viii)** interpret and administer the Plan and any instrument or agreement entered into under or in connection with the Plan, including any Award Agreement;

- (ix) correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent that the Administrator shall deem desirable to carry it into effect;
- (x) establish such rules and regulations and appoint such agents and/or committees of Company employees as it shall deem appropriate for the proper administration of the Plan;
- (xi) determine whether any Award, other than an Option or Stock Appreciation Right, will have Dividend Equivalents; and
- (xii) make any other determination and take any other action that the Administrator deems necessary or desirable for the administration of the Plan.

**3.2. Administrator Decisions.** Decisions of the Administrator shall be final, conclusive and binding on all persons or entities, including the Company, any Participant, and any Affiliate. A majority of the members of the Administrator may determine its actions.

**3.3. Section 409A of the Code.** Each Award may contain such terms as the Administrator determines, and shall be construed and administered, such that the Award either (i) qualifies for an exemption from the requirements of Section 409A of the Code, or (ii) satisfies such requirements.

#### **SECTION 4. STOCK SUBJECT TO THE PLAN**

**4.1. Number of Shares.** (a) Subject to adjustment as provided in Subsection 15.1, a total of [9,400,000] shares of Stock shall be authorized for grant under the Plan *less* one (1) share for every one (1) share that was granted after December 31, 2009 under the Prior Plans or under the Plan prior to the date of adoption by the stockholders of the Company. After the effective date of the Plan (as provided in Section 13), no awards may be granted under any Prior Plans.

(b) If (i) any Stock subject to an Award are forfeited, an Award expires or otherwise terminates without issuance of Stock, or an Award is settled for cash (in whole or in part) or otherwise does not result in the issuance of all or a portion of the Stock subject to such Award (including on payment in Stock on exercise of a Stock Appreciation Right), such Stock shall, to the extent of such forfeiture, expiration, termination, cash settlement or non-issuance, again be available for issuance under the Plan or (ii) after December 31, 2009 any Stock subject to an award under the Prior Plans are forfeited, expire or otherwise terminate without issuance of such Stock, or an award under the Prior Plans is settled for cash (in whole or in part), expire or otherwise terminate without issuance of such Stock, or otherwise does not result in the issuance of all or a portion of the Stock subject to such award (including on payment in Stock on exercise of a stock appreciation right), such Stock shall, to the extent of such forfeiture, expiration, termination, cash settlement or non-issuance, again be available for issuance under the Plan.

(c) The maximum number of shares covered by Incentive Stock Options that may be awarded under the Plan shall be the aggregate of the shares of Stock specified in Paragraph (a) above.

(d) In the event that (i) any Option or other Award granted hereunder is exercised through the tendering of Stock (either actually or by attestation) or by the withholding of Stock by the Company, or (ii) withholding tax liabilities arising from such Option or other Award are satisfied by the tendering of Stock (either actually or by attestation) or by the withholding of Stock by the Company, then the Stock so tendered or withheld shall be available for issuance under the Plan. In the event that after December 31, 2009 (iii) any option or award granted under the Prior Plans is exercised through the tendering of Stock (either actually or by attestation) or by the withholding of Stock by the Company, or (iv) withholding tax liabilities arising from such options or awards are satisfied by the tendering of Stock (either actually or by attestation) or by the withholding of Stock by the Company, then the Stock so tendered or withheld shall be available for Award, grant and issuance under the Plan.

(e) To the extent consistent with the requirements of Section 422 of the Code, Substitute Awards shall not reduce the Stock authorized for grant under the Plan or the applicable Limitations for grant to a Participant under Subsection 11.5, nor shall Stock subject to a Substitute Award again be available for Awards under the Plan to the extent of any forfeiture, expiration or cash settlement as provided in paragraph (b) above. Additionally, in the event that a company acquired by the Company or any Affiliate or with which the Company or any Affiliate combines has shares available under a pre-existing plan approved by stockholders and not adopted in contemplation of such acquisition or combination, the shares available for grant pursuant to the terms of such pre-existing plan (as adjusted, to the extent appropriate, using the exchange ratio or other adjustment or valuation ratio or formula used in such acquisition or combination to determine the consideration payable to the holders of common stock of the entities party to such acquisition or combination) may be used for Awards under the Plan and shall not reduce the Stock authorized for grant under the Plan; *provided* that Awards using such available shares shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, and shall only be made in compliance with the applicable requirements of the NASDAQ or of any established stock exchange on which the Stock may be listed.

(f) Each share of Stock subject to any Award under the Plan shall be counted against the limits set forth in Section 4.1(a) as one share.

**4.2. Character of Stock.** Any Stock issued hereunder may consist, in whole or in part, of authorized and unissued shares, treasury shares or shares purchased in the open market or otherwise.

## SECTION 5. ELIGIBILITY AND PARTICIPATION

The Administrator will select Participants from among those key Employees, Directors, and other individuals or entities providing services to the Company or its Affiliates who, in the opinion of the Administrator, are in a position to make a significant contribution to the success of the Company and/or its Affiliates. Eligibility for Incentive Stock Options is further limited to those individuals whose employment status would qualify them for the tax treatment described in Sections 421 and 422 of the Code. Eligibility for Stock Options other than Incentive Stock Options is limited to individuals described in the first sentence of this Section 5 who are providing direct services on the date of grant of the Stock Option to the Company or to a subsidiary of the Company that would be described in the first sentence of Treas. Regs. §1.409A-1(b)(5)(iii)(E).

## SECTION 6. STOCK OPTIONS

**6.1. Grant of Options.** Options may be granted hereunder to Participants either alone or in addition to other Awards granted under the Plan. Any Option shall be subject to the terms and conditions of this Article and to such additional terms and conditions, not inconsistent with the provisions of the Plan, as the Administrator shall deem desirable.

**6.2. Award Agreements.** All Options shall be evidenced by a written Award Agreement in such form and containing such terms and conditions as the Administrator shall determine which are not inconsistent with the provisions of the Plan. The terms and conditions of Options need not be the same with respect to each Participant. Granting an Option pursuant to the Plan shall impose no obligation on the recipient to exercise such Option. Any individual who is granted an Option pursuant to this Article may hold more than one Option granted pursuant to the Plan at the same time.

**6.3. Option Price.** Other than in connection with Substitute Awards, the option price per each share of Stock purchasable under any Option granted pursuant to this Article shall not be less than 100% of the Fair Market Value of one share of Stock on the date of grant of such Option; *provided, however*, that in the case of an Incentive Stock Option granted to a Participant who, at the time of the grant, owns stock representing more than 10% of the voting power of all classes of Stock of the Company or any Affiliate, the option price per share shall be no less than 110% of the Fair Market Value of one Share on the date of grant. Except in connection with a corporate transaction (including, without limitation, any stock dividend, stock split, extraordinary cash dividend, recapitalization, reorganization, merger, consolidation, split-up, spin-off, combination or exchange of shares), the Administrator shall not without the approval of the Company's stockholders (a) lower the option price per share of Stock of an Option after it is granted, (b) cancel an Option when the option price per share of Stock exceeds the Fair Market Value of one share of Stock in exchange for cash or another Award (other than in connection with a Change in Control or a Substitute Award), or (c) take any other action with respect to an Option that would be treated as a repricing under the rules and regulations of the principal U.S. national securities exchange on which the Stock is traded.

**6.4. Option Term.** The term of each Option shall be fixed by the Administrator in its sole discretion; provided that no Option shall be exercisable after the expiration of ten

(10) years from the date the Option is granted; provided, however, that the term of the Option shall not exceed five (5) years from the date the Option is granted in the case of an Incentive Stock Option granted to a Participant who, at the time of the grant, owns Stock representing more than 10% of the voting power of all classes of Stock of the Company or any Affiliate.

**6.5. Exercise of Options.** (a) Vested Options granted under the Plan shall be exercised by the Participant or by a Permitted Assignee thereof (or by the Participant's executors, administrators, guardian or legal representative, as may be provided in an Award Agreement) as to all or part of the Stock covered thereby, by giving notice of exercise to the Company or its designated agent, specifying the number of shares of Stock to be purchased. The notice of exercise shall be in such form, made in such manner, and in compliance with such other requirements consistent with the provisions of the Plan as the Administrator may, from time to time, prescribe.

(b) Unless otherwise provided in an Award Agreement, full payment of such purchase price shall be made at the time of exercise and shall be made (i) in cash or cash equivalents (including certified check or bank check or wire transfer of immediately available funds), (ii) by tendering previously acquired Stock (either actually or by attestation) valued at their then Fair Market Value, (iii) with the consent of the Administrator, by delivery of other consideration having a Fair Market Value on the exercise date equal to the total purchase price, (iv) with the consent of the Administrator, by withholding Stock otherwise issuable in connection with the exercise of the Option, (v) through any other method specified in an Award Agreement (including same-day sales through a broker), or (vi) any combination of any of the foregoing. The notice of exercise, accompanied by such payment, shall be delivered to the Company at its principal business office or such other office as the Administrator may from time to time direct, and shall be in such form, containing such further provisions consistent with the provisions of the Plan, as the Administrator may, from time to time, prescribe. In no event may any Option granted hereunder be exercised for a fraction of a share of Stock. Except for Substitute Awards, under circumstances contemplated by Subsection 12.2 or as may be set forth in an Award Agreement with respect to: (A) retirement, death or disability of a Participant, or (B) special circumstances determined by the Administrator (such as the achievement of performance objectives), Options granted to employees of the Company or any Affiliate will not be exercisable before the expiration of one year from the date the Option is granted (but may become exercisable pro rata over such time).

(c) Notwithstanding the foregoing, an Award Agreement may provide that if on the last day of the term of an Option the Fair Market Value of one share of Stock exceeds the option price per Share, the Participant has not exercised the Option (or a tandem Stock Appreciation Right, if applicable) and the Option has not expired, the Option shall be deemed to have been exercised by the Participant on such day with payment made by withholding Stock otherwise issuable in connection with the exercise of the Option. In such event, the Company shall deliver to the Participant the number of shares of Stock for which the Option was deemed exercised, less the number of shares of Stock required to be withheld for the payment of the total purchase price and required withholding taxes; provided, however, any fractional share of Stock shall be settled in cash.

**6.6. Form of Settlement.** In its sole discretion, the Administrator may provide in the Award Agreement that the Stock to be issued upon an Option's exercise shall be in the form of Restricted Stock or other similar securities.

**6.7. Incentive Stock Options.** The Administrator may grant Incentive Stock Options to any employee of the Company or any Affiliate, subject to the requirements of Section 422 of the Code. The terms and size of any Incentive Stock Option Award shall contain such provisions as may be necessary to meet the requirements of Section 422 of the Code or any successor provision thereto and any rulings or regulations of the U. S. Department of the Treasury promulgated thereunder.

## **SECTION 7. STOCK APPRECIATION RIGHTS**

**7.1. Grant and Exercise.** The Administrator may provide Stock Appreciation Rights: **(a)** in tandem with all or part of any Option granted under the Plan or at any subsequent time during the term of such Option, **(b)** in tandem with all or part of any Award (other than an Option) granted under the Plan or at any subsequent time during the term of such Award, or **(c)** without regard to any Option or other Award; in each case, upon such terms and conditions as the Administrator may establish in its sole discretion.

**7.2. Terms and Conditions.** Stock Appreciation Rights shall be subject to such terms and conditions, not inconsistent with the provisions of the Plan, as shall be determined, from time to time, by the Administrator, including the following:

**(a)** Upon the exercise of a Stock Appreciation Right, the holder shall have the right to receive the excess of **(i)** the Fair Market Value of one share of Stock on the date of exercise (or such amount less than such Fair Market Value as the Administrator shall so determine at any time during a specified period before the date of exercise) over **(ii)** the grant price of the Stock Appreciation Right.

**(b)** The Administrator shall determine in its sole discretion whether payment of a Stock Appreciation Right shall be made in cash, in whole Stock or other property, or any combination thereof.

**(c)** The terms and conditions of Stock Appreciation Rights need not be the same with respect to each recipient.

**(d)** The Administrator may impose such other terms and conditions on the exercise of any Stock Appreciation Right, as it shall deem appropriate. A Stock Appreciation Right shall: **(i)** have a grant price not less than the Fair Market Value of one share of Stock on the date of grant or, if applicable, on the date of grant of an Option with respect to a Stock Appreciation Right granted in exchange for or in tandem with, but subsequent to, the Option (subject to the requirements of Section 409A of the Code) except in the case of Substitute Awards or in connection with an adjustment provided in Subsection 15.1, **(ii)** have a term not greater than ten (10) years, and **(iii)** with respect to an Award to an employee of the Company, not be exercisable before the expiration of one year from the date of grant (but may

become exercisable pro rata over such time), except for Substitute Awards, under circumstances contemplated by Subsection 12.2 or as may be set forth in an Award Agreement with respect to **(x)**, retirement, death or disability of a Participant or **(y)** special circumstances determined by the Administrator, such as the achievement of performance objectives.

**(e)** An Award Agreement may provide that if on the last day of the term of a Stock Appreciation Right the Fair Market Value of one share of Stock exceeds the grant price per share of the Stock Appreciation Right, the Participant has not exercised the Stock Appreciation Right or the tandem Option (if applicable), and neither the Stock Appreciation Right nor the Option has expired, the Stock Appreciation Right shall be deemed to have been exercised by the Participant on such day. In such event, the Company shall make payment to the Participant in accordance with this Subsection, reduced by the number of shares of Stock (or cash) required for withholding taxes; any fractional Share shall be settled in cash.

**(f)** Except in connection with a corporate transaction (including, without limitation, any stock dividend, stock split, extraordinary cash dividend, recapitalization, reorganization, merger, consolidation, split-up, spin-off, combination or exchange of shares), without the approval of the Company's stockholders the Administrator shall not **(i)** reduce the grant price of any Stock Appreciation Right after the date of grant **(ii)** cancel any Stock Appreciation Right when the grant price per Share exceeds the Fair Market Value of one share of Stock in exchange for cash or another Award (other than in connection with a Substitute Award)), and **(iii)** take any other action with respect to a Stock Appreciation Right that would be treated as a repricing under the rules and regulations of the principal U.S. national securities exchange on which the Stock is traded.

## **SECTION 8. RESTRICTED STOCK AND RESTRICTED STOCK UNITS**

**8.1. Grants.** Awards of Restricted Stock and of Restricted Stock Units may be issued hereunder to Participants either alone or in addition to other Awards granted under the Plan (a "Restricted Stock Award" or "Restricted Stock Unit Award" respectively), and such Restricted Stock Awards and Restricted Stock Unit Awards shall also be available as a form of payment of Performance Awards and other earned cash-based incentive compensation. The Administrator has absolute discretion to determine whether any consideration (other than services) is to be received by the Company or any Affiliate as a condition precedent to the issuance of Restricted Stock or Restricted Stock Units.

**8.2. Award Agreements.** The terms of any Restricted Stock Award or Restricted Stock Unit Award granted under the Plan shall be set forth in an Award Agreement which shall contain provisions determined by the Administrator and not inconsistent with the Plan. The terms of Restricted Stock Awards and Restricted Stock Unit Awards need not be the same with respect to each Participant.

**8.3. Rights of Holders of Restricted Stock and Restricted Stock Units.** Unless otherwise provided in the Award Agreement, beginning on the date of grant of the Restricted Stock Award and subject to execution of the Award Agreement, the

Participant shall become a stockholder of the Company with respect to all Stock subject to the Award Agreement and shall have all of the rights of a stockholder, including the right to vote such Stock and the right to receive distributions made with respect to such Stock. A Participant receiving a Restricted Stock Unit Award shall not possess voting rights with respect to such Award. Except as otherwise provided in an Award Agreement, any Stock or any other property (other than cash) distributed as a dividend or otherwise with respect to any Restricted Stock Award or the number of shares of Stock covered by a Restricted Stock Unit Award as to which the restrictions have not yet lapsed shall be subject to the same restrictions as such Restricted Stock Award or Restricted Stock Unit Award. Notwithstanding the provisions of this Subsection, cash dividends with respect to any Restricted Stock Award and any other property (other than cash) distributed as a dividend or otherwise with respect to any Restricted Stock Award or the number of shares of Stock covered by a Restricted Stock Unit Award that vests based on achievement of performance goals shall be subject to restrictions and risk of forfeiture to the same extent as the Restricted Stock or Restricted Stock Units with respect to which such cash, Stock or other property has been distributed.

**8.4. Minimum Vesting Period.** Restricted Stock Awards and Restricted Stock Unit Awards shall have a Vesting Period of not less than **(i)** three (3) years from date of grant (but permitting pro rata vesting over such time) if subject only to continued service with the Company or an Affiliate and **(ii)** one (1) year from date of grant if subject to the achievement of performance objectives, subject in either case to accelerated vesting in the Administrator's discretion in the event of the death, disability or retirement of the Participant or a Change in Control (as defined in Subsection 12.3). Notwithstanding the foregoing, the restrictions in the preceding sentence shall not be applicable to grants of up to 10% of the number of shares of Stock available for Awards under Subsection 4.1(a) on the effective date of the Plan. Subject to the foregoing minimum Vesting Period requirements, the Administrator may, in its sole discretion and subject to the limitations imposed under Section 162(m) of the Code and the regulations thereunder in the case of a Restricted Stock Award or Restricted Stock Unit Award intended to comply with the performance-based exception under Code Section 162(m), waive the forfeiture period and any other conditions set forth in any Award Agreement under such terms and conditions as the Administrator shall deem appropriate.

**8.5 Issuance of Stock.** Any Restricted Stock granted under the Plan may be evidenced in such manner as the Administrator may deem appropriate, including book-entry registration or issuance of a stock certificate or certificates, which certificate or certificates shall be held by the Company. Such certificate or certificates shall be registered in the name of the Participant and shall bear an appropriate legend referring to the restrictions applicable to such Restricted Stock.

## **SECTION 9. OTHER STOCK BASED AWARDS**

**9.1. Grants.** Other Awards of Stock and other Awards that are valued in whole or in part by reference to, or are otherwise based on, Stock or other property ("Other Share-Based Awards"), including deferred stock units, may be granted hereunder to Participants either alone or in addition to other Awards granted under the Plan. Other Share-Based Awards shall also be available as a form of payment of other Awards granted under the Plan and other earned cash-based compensation.



**9.2. Award Agreements.** The terms of Other Share-Based Awards granted under the Plan shall be set forth in an Award Agreement which shall contain provisions determined by the Administrator and not inconsistent with the Plan. The terms of such Awards need not be the same with respect to each Participant. Notwithstanding the provisions of this Subsection, any property (other than cash) distributed as a dividend or otherwise with respect to the number of shares of Stock covered by an Other Share-Based Award that vests based on achievement of performance goals shall be subject to restrictions and risk of forfeiture to the same extent as the Stock covered by a Other Share-Based Award with respect to which such cash, Stock or other property has been distributed.

**9.3. Minimum Vesting Period.** Other Share-Based Awards shall have a Vesting Period of not less than: **(i)** three (3) years from date of grant (but permitting pro rata vesting over such time) if subject only to continued service with the Company or an Affiliate and **(ii)** one (1) year) from date of grant if subject to the achievement of performance objectives, subject in either case to accelerated vesting in the Administrator's discretion in the event of the death, disability or retirement of the Participant or a Change in Control (as defined in Subsection 12.3). Notwithstanding the foregoing, the restrictions in the preceding sentence shall not be applicable to grants of up to 10% of the number of shares of Stock available for Awards under Subsection 4.1(a) on the effective date of the Plan. Subject to the foregoing minimum Vesting Period requirements, the Administrator may, in its sole discretion and subject to the limitations imposed under Section 162(m) of the Code and the regulations thereunder in the case of an Other Share-Based Award intended to comply with the performance-based exception under Code Section 162(m), waive the forfeiture period and any other conditions set forth in any Award Agreement under such terms and conditions as the Administrator shall deem appropriate.

**9.4. Payment.** Except as may be provided in an Award Agreement, Other Share-Based Awards may be paid in cash, Stock, other property, or any combination thereof, in the sole discretion of the Administrator. Other Share-Based Awards may be paid in a lump sum or in installments or, in accordance with procedures established by the Administrator, on a deferred basis subject to the requirements of Section 409A of the Code.

**9.5. Deferral of Director Fees.** Directors shall, if determined by the Board, receive Other Share-Based Awards in the form of deferred stock units in lieu of all or a portion of their annual retainer. In addition Directors may elect to receive Other Share-Based Awards in the form of deferred stock units in lieu of all or a portion of their annual and committee retainers and annual meeting fees, provided that such election is made in accordance with the requirements of Section 409A of the Code. The Administrator shall, in its absolute discretion, establish such rules and procedures as it deems appropriate for such elections and for the payment the deferred stock units.

## **SECTION 10. PERFORMANCE AWARDS**

**10.1. Grants.** Performance Awards in the form of Performance Cash, Performance Stock or Performance Units, as determined by the Administrator in its sole discretion, may be granted hereunder to Participants, for no consideration or for such minimum consideration as may be required by applicable law, either alone or in addition to other Awards granted under the Plan. The performance goals to be achieved for each Performance Period shall be conclusively determined by the Administrator and shall be based upon one or more of the Performance Criteria as the Administrator may determine.

**10.2. Award Agreements.** The terms of any Performance Award granted under the Plan shall be set forth in an Award Agreement which shall contain provisions determined by the Administrator and not inconsistent with the Plan, including whether such Awards shall have Dividend Equivalents (subject to the requirements of Subsection 15.4). The terms of Performance Awards need not be the same with respect to each Participant.

**10.3. Terms and Conditions.** The specific Performance Criteria to be achieved during any Performance Period and the length of the Performance Period shall be determined by the Administrator upon the grant of each Performance Award. The amount of the Award to be distributed shall be conclusively determined by the Administrator.

**10.4. Payment.** Performance Awards will be distributed only after the end of the relevant Performance Period and after the Administrator shall have certified that the Performance Criteria with respect to the Performance Award has been attained during the relevant Performance Period. Performance Awards may be paid in cash, Stock, other property, or any combination thereof, in the sole discretion of the Administrator. Performance Awards may be paid in a lump sum or in installments following the close of the Performance Period or, in accordance with procedures established by the Administrator, on a deferred basis subject to the requirements of Section 409A of the Code.

## **SECTION 11. CODE SECTION 162(M) PROVISIONS**

**11.1. Covered Employees.** Notwithstanding any other provision of the Plan, if the Administrator determines at the time a Performance Award (not otherwise subject to this Section 11), Restricted Stock Award, a Restricted Stock Unit Award or an Other Share-Based Award is granted to a Participant who is, or is likely to be, as of the end of the tax year in which the Company would claim a tax deduction in connection with such Award, a Covered Employee, then the Administrator may provide that this Section 11 is applicable to such Award.

**11.2. Performance Criteria.** If the Administrator determines that a Performance Award, Restricted Stock Award, a Restricted Stock Unit or an Other Share-Based Award is intended to be subject to this Section 11, the lapsing of restrictions thereon and the distribution of cash, Stock or other property pursuant thereto, as applicable, shall be subject to the achievement of one or more objective performance goals established by the Administrator, which shall be based on the attainment of specified

levels of one or any combination of the Performance Criteria. Such performance goals also may be based solely by reference to the Company's performance or the performance of a Affiliate, division, business segment or business unit of the Company, or based upon the relative performance of other companies or upon comparisons of any of the indicators of performance relative to other companies. The Administrator may also exclude charges related to an event or occurrence which the Administrator determines should appropriately be excluded, including without limit: **(a)** restructurings, discontinued operations, extraordinary items, and other unusual or non-recurring charges, **(b)** an event either not directly related to the operations of the Company or not within the reasonable control of the Company's management, or **(c)** the cumulative effects of tax or accounting changes in accordance with U.S. generally accepted accounting principles. Such performance goals, and any related exclusions of charges as described in the preceding sentence, shall be set by the Administrator within the time period prescribed by, and shall otherwise comply with the requirements of, Section 162(m) of the Code, and the regulations thereunder. No Award to which this Section 11 applies may be granted after the first meeting of the stockholders of the Company held in 2015 until the listed performance measures set forth in the definition of "Performance Criteria" (as originally approved or as subsequently amended) have been resubmitted to and reapproved by the stockholders of the Company in accordance with the requirements of Section 162(m) of the Code, unless such grant is made contingent upon such approval.

**11.3. Adjustments.** Notwithstanding any provision of the Plan (other than Section 12), with respect to any Performance Award, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award that is subject to this Section 11, the Administrator may adjust downwards, but not upwards, the amount payable pursuant to such Award, and the Administrator may not waive the achievement of the applicable performance goals except in the case of the death or disability of the Participant.

**11.4. Restrictions.** The Administrator shall have the power to impose such other restrictions on Awards subject to this Section 11 as it may deem necessary or appropriate to ensure that such Awards satisfy all requirements for "performance-based compensation" within the meaning of Section 162(m) of the Code. No Award made subject to this Section 11 shall be paid until the Administrator shall have certified that the Performance Criteria with respect to such Award has been attained during the relevant Performance Period.

**11.5. Limitations on Grants to Individual Participants.** Subject to adjustment as provided in Subsection 15.1, the maximum number of shares of Stock for which Stock Options may be granted to any person in any calendar year, the maximum number of shares of Stock subject to Stock Appreciation Rights granted to any person in any calendar year, the maximum number of shares of Stock subject to Performance Awards granted to any person in any calendar year and the aggregate maximum number of shares of Stock subject to other Awards that may be delivered to any person in any calendar year shall each be 1,000,000. For purposes of the preceding sentence, the repricing of a Stock Option or Stock Appreciation Right shall be treated as a new grant to the extent required under Section 162(m) of the Code. Subject to these limitations, each Participant shall be eligible in any year to receive Awards covering up to the full

number of shares of Stock then available for Awards under the Plan. No more than \$1,000,000 may be paid to any individual with respect to any Performance Award payable in cash. In applying the limitation of the preceding sentence: **(A)** multiple Performance Awards payable in Cash to the same individual that are determined by reference to performance periods of one year or less ending with or within the same fiscal year of the Company shall be subject in the aggregate to one limit of such amount, and **(B)** multiple Performance Awards payable in cash to the same individual that are determined by reference to one or more multi-year performance periods ending in the same fiscal year of the Company shall be subject in the aggregate to a separate limit of such amount. If an Award is cancelled, the cancelled Award shall continue to be counted toward the applicable Limitations (or, if denominated in cash, toward the dollar amount in the preceding sentence).

## SECTION 12. CHANGE IN CONTROL PROVISIONS

**12.1. Assumption or Substitution.** If the Change in Control is one in which there is an acquiring or surviving entity, the Administrator may provide for the assumption or continuation of some or all outstanding Awards or for the grant of new awards in substitution therefor by the acquiror or survivor or an affiliate of the acquiror or survivor.

Unless otherwise provided in an Award Agreement, and only to the extent consistent with Section 409A of the Code, in the event of a Change in Control of the Company in which the successor company assumes or substitutes for an Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award (or in which the Company is the ultimate parent corporation and continues the Award), if a Participant's employment with such successor company (or the Company) or a subsidiary thereof is involuntarily terminated without Cause by the successor employer within 24 months following such Change in Control (or such other period set forth in the Award Agreement, including prior thereto if applicable) and under the circumstances specified in the Award Agreement: **(i)** Options and Stock Appreciation Rights outstanding as of the date of such termination of employment will immediately vest, become fully exercisable, and may thereafter be exercised for 24 months (or the period of time set forth in the Award Agreement), **(ii)** the restrictions, limitations and other conditions applicable to Restricted Stock and Restricted Stock Units outstanding as of the date of such termination of employment shall lapse and the Restricted Stock and Restricted Stock Units shall become free of all restrictions, limitations and conditions and become fully vested, and **(iii)** the restrictions, limitations and other conditions applicable to any Other Share-Based Awards or any other Awards shall lapse, and such Other Share-Based Awards or such other Awards shall become free of all restrictions, limitations and conditions and become fully vested and transferable to the full extent of the original grant. For the purposes of this Subsection 12.1, an Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award shall be considered assumed or substituted for if following the Change in Control the Award confers the right to purchase or receive, for each share of Stock subject to the Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award immediately prior to the Change in Control, the consideration (whether stock, cash or other securities or property) received in the transaction constituting a Change in Control by holders of Stock for each Share held on the effective date of such transaction (and if holders were

offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Stock); provided, however, that if such consideration received in the transaction constituting a Change in Control is not solely common stock of the successor company, the Administrator may, with the consent of the successor company, provide that the consideration to be received upon the exercise or vesting of an Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award, for each Share subject thereto, will be solely common stock of the successor company substantially equal in fair market value to the per Share consideration received by holders of Stock in the transaction constituting a Change in Control. The determination of such substantial equality of value of consideration shall be made by the Administrator in its sole discretion and its determination shall be conclusive and binding.

**12.2. Awards Not Assumed or Substituted.** Unless otherwise provided in an Award Agreement, in the event of a Change in Control of the Company to the extent the successor company does not assume or substitute for an Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award or Other Share-Based Award (or in which the Company is the ultimate parent corporation and does not continue the Award): **(i)** those Options and Stock Appreciation Rights outstanding as of the date of the Change in Control that are not assumed or substituted for (or continued) shall immediately vest and become fully exercisable, **(ii)** restrictions, limitations and other conditions applicable to Restricted Stock and Restricted Stock Units that are not assumed or substituted for (or continued) shall lapse and the Restricted Stock and Restricted Stock Units shall become free of all restrictions, limitations and conditions and become fully vested, and **(iii)** the restrictions, other limitations and other conditions applicable to any Other Share-Based Awards or any other Awards that are not assumed or substituted for (or continued) shall lapse, and such Other Share-Based Awards or such other Awards shall become free of all restrictions, limitations and conditions and become fully vested and transferable to the full extent of the original grant; provided, that to the extent acceleration pursuant to this Section 12.2 of an Award subject to Section 409A would cause the Award to fail to satisfy the requirements of Section 409A, the Award may not be accelerated and the Administrator in lieu thereof shall take such steps as are necessary to ensure that payment of the Award is made in a medium other than Stock and on terms that as nearly as possible, but taking into account adjustments required or permitted by this Section 11 and Section 15.1, replicate the prior terms of the Award.

**12.3. Change in Control.** For purposes of the Plan, unless otherwise provided in an Award Agreement, Change in Control means the occurrence of any one of the following events:

**(a)** During any twenty-four (24) month period, individuals who, as of the beginning of such period, constitute the Board (the "Incumbent Directors") cease for any reason to constitute at least a majority of the Board, provided that any person becoming a director subsequent to the beginning of such period whose election or nomination for election was approved by a vote of at least a majority of the Incumbent Directors then on the Board (either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for director, without written objection to such nomination) shall be an Incumbent Director; provided,

however, that no individual initially elected or nominated as a director of the Company as a result of an actual or threatened election contest with respect to directors or as a result of any other actual or threatened solicitation of proxies by or on behalf of any person other than the Board shall be deemed to be an Incumbent Director;

(b) Any “person” (as such term is defined in the Exchange Act and as used in Sections 13(d)(3) and 14(d)(2) of the Exchange Act) is or becomes a “beneficial owner” (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 30% or more of the combined voting power of the Company’s then outstanding securities eligible to vote for the election of the Board (the “Company Voting Securities”); provided, however, that the event described in this paragraph (b) shall not be deemed to be a Change in Control by virtue of any of the following acquisitions by: (i) the Company or any Affiliate, (ii) any employee benefit plan (or related trust) sponsored or maintained by the Company or any Affiliate, (iii) any underwriter temporarily holding securities pursuant to an offering of such securities, (iv) any person pursuant to a Non-Qualifying Transaction, as defined in paragraph (c) below, or (v) any person of Voting Securities from the Company, if a majority of the Incumbent Board approves in advance the acquisition of beneficial ownership of 30% or more of Company Voting Securities by such person;

(c) The consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving the Company or any of its Affiliates that requires the approval of the Company’s stockholders, whether for such transaction or the issuance of securities in the transaction (a “Business Combination”), unless immediately following such Business Combination: (i) more than 50% of the total voting power of (A) the corporation resulting from such Business Combination (the “Surviving Corporation”), or (B) if applicable, the ultimate parent corporation that directly or indirectly has beneficial ownership of 100% of the voting securities eligible to elect directors of the Surviving Corporation (the “Parent Corporation”), is represented by Company Voting Securities that were outstanding immediately prior to such Business Combination (or, if applicable, is represented by shares into which such Company Voting Securities were converted pursuant to such Business Combination), and such voting power among the holders thereof is in substantially the same proportion as the voting power of such Company Voting Securities among the holders thereof immediately prior to the Business Combination, (ii) no person (other than any employee benefit plan (or related trust) sponsored or maintained by the Surviving Corporation or the Parent Corporation), is or becomes the beneficial owner, directly or indirectly, of 30% or more of the total voting power of the outstanding voting securities eligible to elect directors of the Parent Corporation (or, if there is no Parent Corporation, the Surviving Corporation) and (iii) at least a majority of the members of the board of directors of the Parent Corporation (or, if there is no Parent Corporation, the Surviving Corporation) following the consummation of the Business Combination were Incumbent Directors at the time of the Board’s approval of the execution of the initial agreement providing for such Business Combination (any Business Combination which satisfies all of the criteria specified in (i), (ii) and (iii) above shall be deemed to be a “Non-Qualifying Transaction”);

(d) The stockholders of the Company approve a plan of complete liquidation or dissolution of the Company or the consummation of a sale of all or substantially all of the Company's assets; or

(e) The occurrence of any other event that the Board determines by a duly approved resolution constitutes a Change in Control.

Notwithstanding the foregoing, a Change in Control shall not be deemed to occur solely because any person acquires beneficial ownership of more than 30% of the Company Voting Securities as a result of the acquisition of Company Voting Securities by the Company which reduces the number of Company Voting Securities outstanding; provided, that if after such acquisition by the Company such person becomes the beneficial owner of additional Company Voting Securities that increases the percentage of outstanding Company Voting Securities beneficially owned by such person, a Change in Control of the Company shall then occur.

**12.4. Cash Out, etc. of Awards.** The Administrator, in its discretion, may determine that, upon the occurrence of a Change in Control of the Company, each Option and Stock Appreciation Right outstanding shall terminate within a specified number of days after notice to the Participant, and/or that each Participant shall receive, with respect to each share of Stock subject to such Option or Stock Appreciation Right, an amount equal to the excess of the Fair Market Value of such share of Stock immediately prior to the occurrence of such Change in Control over the exercise price per share of such Option and/or Stock Appreciation Right; such amount to be payable in cash, in one or more kinds of stock or property (including the stock or property, if any, payable in the transaction) or in a combination thereof, as the Administrator, in its discretion, shall determine; *provided*, that the Administrator may not exercise its discretion under this Section 12.4 with respect to an Award or portion thereof providing for "nonqualified deferred compensation" subject to Section 409A in a manner that would constitute an extension or acceleration of, or other change in, payment terms if such change would be inconsistent with the applicable requirements of Section 409A. Award Agreements may provide that in the event of a Change in Control of the Company all Performance Awards shall be considered to be earned and payable (either in full or pro rata based on the portion of the Performance Period completed as of the date of the Change in Control), and any limitations or other restrictions shall lapse and such Performance Awards shall be immediately settled and distributed.

### **SECTION 13. EFFECTIVE DATE AND TERM OF THE PLAN.**

The Plan shall be effective on the date of the approval of the Plan by the holders of the shares entitled to vote at a duly constituted meeting of the stockholders of the Company. The Plan shall be null and void and of no effect if the foregoing condition is not fulfilled and in such event each Award shall, notwithstanding any of the preceding provisions of the Plan, be null and void and of no effect. Awards may be granted under the Plan at any time and from time to time on or prior to the tenth anniversary of the effective date of the Plan, unless sooner terminated by the Board pursuant to Section 14 below, on which date the Plan will expire except as to Awards then outstanding under the Plan. Such outstanding Awards shall remain in effect until they have been exercised or terminated, or have expired.

#### SECTION 14. AMENDMENT AND TERMINATION OF THE PLAN.

The Board may, from time to time, alter, amend, suspend or terminate the Plan as it shall deem advisable, subject to any requirement for stockholder approval imposed by applicable law, including the rules and regulations of the principal U.S. national securities exchange on which the Shares is traded; *provided* that the Board may not amend the Plan in any manner that would result in noncompliance with Rule 16b-3 of the Exchange Act; and *further provided* that the Board may not, without the approval of the Company's stockholders, to the extent required by such applicable law, amend the Plan to: **(a)** increase the number of shares of Stock that may be the subject of Awards under the Plan (except for adjustments pursuant to Subsection 15.1); **(b)** expand the types of awards available under the Plan; **(c)** materially expand the class of persons eligible to participate in the Plan; **(d)** amend Subsection 6.3 or Subsection 7.2(f) to eliminate the requirements relating to minimum exercise price, minimum grant price and stockholder approval; **(e)** increase the maximum permissible term of any Option specified by Subsection 6.4 or the maximum permissible term of a Stock Appreciation Right specified by Subsection 7.2(d); or **(f)** increase the Limitations. The Board may not, without the approval of the Company's stockholders, cancel an Option or Stock Appreciation Right in exchange for cash when the exercise or grant price per share exceeds the Fair Market Value of one Share or take any action with respect to an Option or Stock Appreciation Right that would be treated as a repricing under the rules and regulations of the principal securities exchange on which the Stock is traded, including a reduction of the exercise price of an Option or the grant price of a Stock Appreciation Right or the exchange of an Option or Stock Appreciation Right for another Award. In addition, no amendments to, or termination of, the Plan shall impair the rights of a Participant in any material and adverse respect under any Award previously granted without such Participant's consent.

#### SECTION 15. PROVISIONS OF GENERAL APPLICABILITY

**15.1. Adjustments.** In the event of any merger, reorganization, consolidation, recapitalization, dividend or distribution (whether in cash, shares or other property, other than a regular cash dividend), stock split, reverse stock split, spin-off or similar transaction or other change in corporate structure affecting the Stock or the value thereof, such adjustments and other substitutions shall be made to the Plan and to Awards as the Administrator deems equitable or appropriate taking into consideration the accounting and tax consequences, including such adjustments in the aggregate number, class and kind of securities that may be delivered under the Plan, the Limitations, the maximum number of shares of Stock that may be issued pursuant to Incentive Stock Options, and in the number, class, kind and option or exercise price of securities subject to outstanding Awards granted under the Plan (including, if the Administrator deems appropriate, the substitution of similar options to purchase the shares of, or other awards denominated in the shares of, another company) as the Administrator may determine to be appropriate; *provided, however,* that the number of shares of Shares subject to any Award shall always be a whole number.

**15.2. Transferability of Awards.** Except as provided below, no Award and no Stock that have not been issued or as to which any applicable restriction, performance



or deferral period has not lapsed, may be sold, assigned, transferred, pledged or otherwise encumbered, other than by will or the laws of descent and distribution, and such Award may be exercised during the life of the Participant only by the Participant or the Participant's guardian or legal representative. To the extent and under such terms and conditions as determined by the Administrator, a Participant may assign or transfer an Award (each transferee thereof, a "Permitted Assignee") to: **(i)** the Participant's spouse, children or grandchildren (including any adopted and step children or grandchildren), parents, grandparents or siblings; **(ii)** to a trust for the benefit of one or more of the Participant or the persons referred to in clause (i); **(iii)** to a partnership, limited liability company or corporation in which the Participant or the persons referred to in clause (i) are the only partners, members or shareholders; or **(iv)** for charitable donations; provided that such Permitted Assignee shall be bound by and subject to all of the terms and conditions of the Plan and the Award Agreement relating to the transferred Award and shall execute an agreement satisfactory to the Company evidencing such obligations; and provided further that such Participant shall remain bound by the terms and conditions of the Plan. The Company shall cooperate with any Permitted Assignee and the Company's transfer agent in effectuating any transfer permitted under this Subsection.

**15.3. Termination of Employment.** The Administrator shall determine and set forth in each Award Agreement whether any Awards granted in such Award Agreement will continue to be exercisable, continue to vest or be earned and the terms of such exercise, vesting or earning, on and after the date that a Participant ceases to be employed by or to provide services to the Company or any Affiliate (including as a Director), whether by reason of death, disability, voluntary or involuntary termination of employment or services, or otherwise. The date of termination of a Participant's employment or services will be determined by the Administrator, which determination will be final.

**15.4. Deferral; Dividend Equivalents.** The Administrator shall be authorized to establish procedures, subject to the requirements of Section 409A of the Code, to the extent applicable, pursuant to which the payment of any Award may be deferred. Subject to the provisions of the Plan and any Award Agreement, the recipient of an Award other than an Option or Stock Appreciation Right may, if so determined by the Administrator, be entitled to receive, currently or on a deferred basis, amounts equivalent to any cash, stock or other property dividends that may be declared with respect to the Stock ("Dividend Equivalents") with respect to the number of shares of Stock covered by the Award, provided that such Dividend Equivalents shall be subject to the same vesting or performance conditions as the underlying Award. The Administrator may provide that the Dividend Equivalents (if any) shall be deemed to have been reinvested in additional Stock or otherwise reinvested.

**15.5. Award Agreements.** Each Award Agreement shall either be **(a)** in writing in a form approved by the Administrator and executed by the Company by an officer duly authorized to act on its behalf, or **(b)** an electronic notice in a form approved by the Administrator and recorded by the Company (or its designee) in an electronic recordkeeping system used for the purpose of tracking one or more types of Awards as the Administrator may provide; in each case and if required by the Administrator, the Award Agreement shall be executed or otherwise electronically accepted by the

recipient of the Award in such form and manner as the Administrator may require. The Administrator may authorize any officer of the Company to execute any or all Award Agreements on behalf of the Company. The Award Agreement shall set forth the material terms and conditions of the Award as established by the Administrator consistent with the provisions of the Plan.

**15.6. Tax Withholding.** The Company shall have the right to make all payments or distributions pursuant to the Plan to a Participant (or a Permitted Assignee thereof) (any such person, a "Payee") net of any applicable federal, state and local taxes required to be paid or withheld as a result of: **(a)** the grant of any Award; **(b)** the exercise of an Option or Stock Appreciation Right, **(c)** the delivery of Stock or cash; **(d)** the lapse of any restrictions in connection with any Award; or **(e)** any other event occurring pursuant to the Plan. The Company or any Affiliate shall have the right to withhold from wages or other amounts otherwise payable to such Payee such withholding taxes as may be required by law, or to otherwise require the Payee to pay such withholding taxes. If the Payee shall fail to make such tax payments as are required, the Company or its Subsidiaries shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to such Payee or to take such other action as may be necessary to satisfy such withholding obligations. The Administrator shall be authorized to establish procedures for election by Participants to satisfy such obligation for the payment of such taxes by tendering previously acquired Stock (either actually or by attestation, valued at their then Fair Market Value), or by directing the Company to retain Stock (up to the Participant's minimum required tax withholding rate or such other rate that will not cause an adverse accounting consequence or cost) otherwise deliverable in connection with the Award.

**15.7. Right of Discharge Reserved; Claims to Awards.** Nothing in the Plan nor the grant of an Award hereunder shall confer upon any Employee, Director or Consultant the right to continue in the employment or service of the Company or any Affiliate or affect any right that the Company or any Affiliate may have to terminate the employment or service of (or to demote or to exclude from future Awards under the Plan) any such Employee, Director or Consultant at any time for any reason. Except as specifically provided by the Administrator, the Company shall not be liable for the loss of existing or potential profit from an Award granted in the event of termination of an employment or other relationship. No Employee, Director or Consultant shall have any claim to be granted any Award under the Plan, and there is no obligation for uniformity of treatment of Employees, Directors or Consultants under the Plan.

**15.8. Substitute Awards.** Notwithstanding any other provision of the Plan, the terms of Substitute Awards may vary from the terms set forth in the Plan to the extent the Administrator deems appropriate to conform, in whole or in part, to the provisions of the awards in substitution for which they are granted.

**15.9. Cancellation of Award; Forfeiture of Gain.** Notwithstanding anything to the contrary contained herein, an Award Agreement may provide that the Award shall be canceled if the Participant, without the consent of the Company, while employed by or providing services to the Company or any Affiliate or after termination of such employment or service, violates a non-competition, non-solicitation or non-disclosure covenant or agreement or otherwise engages in activity that is in conflict with or adverse

to the interest of the Company or any Affiliate (including conduct contributing to any financial restatements or financial irregularities), as determined by the Administrator in its sole discretion. The Administrator may provide in an Award Agreement that if within the time period specified in the Agreement the Participant establishes a relationship with a competitor or engages in an activity referred to in the preceding sentence, the Participant will forfeit any gain realized on the vesting or exercise of the Award and must repay such gain to the Company.

**15.10. Stop Transfer Orders.** All certificates for Stock delivered under the Plan pursuant to any Award shall be subject to such stop-transfer orders and other restrictions as the Administrator may deem advisable under the rules, regulations and other requirements of the Securities and Exchange Commission, any stock exchange upon which the Stock are then listed or traded, and any applicable federal or state securities law, and the Administrator may cause a legend or legends to be put on any such certificates to make appropriate reference to such restrictions.

**15.11. Nature of Payments.** All Awards made pursuant to the Plan are in consideration of services performed or to be performed for the Company or any Affiliate, division or business unit of the Company. Any income or gain realized pursuant to Awards under the Plan constitutes a special incentive payment to the Participant and shall not be taken into account, to the extent permissible under applicable law, as compensation for purposes of any of the employee benefit plans of the Company or any Affiliate except as may be determined by the Administrator or by the Board.

**15.12. Other Plans.** Nothing contained in the Plan shall prevent the Board from adopting other or additional compensation arrangements, subject to stockholder approval if such approval is required; and such arrangements may be either generally applicable or applicable only in specific cases.

**15.13. Severability.** The provisions of the Plan shall be deemed severable. If any provision of the Plan shall be held unlawful or otherwise invalid or unenforceable in whole or in part by a court of competent jurisdiction or by reason of change to an applicable statute, such provision shall **(a)** be deemed limited to the extent that such court of competent jurisdiction deems it lawful, valid and/or enforceable and as so limited shall remain in full force and effect, and **(b)** not affect any other provision of the Plan or part thereof, each of which shall remain in full force and effect. If the making of any payment or the provision of any other benefit required under the Plan shall be held unlawful or otherwise invalid or unenforceable by a court of competent jurisdiction, such unlawfulness, invalidity or unenforceability shall not prevent any other payment or benefit from being made or provided under the Plan, and if the making of any payment in full or the provision of any other benefit required under the Plan in full would be unlawful or otherwise invalid or unenforceable, then such unlawfulness, invalidity or unenforceability shall not prevent such payment or benefit from being made or provided in part, to the extent that it would not be unlawful, invalid or unenforceable, and the maximum payment or benefit that would not be unlawful, invalid or unenforceable shall be made or provided under the Plan.

**15.14. Construction.** As used in the Plan, the words “include” and “including,” and variations thereof, shall not be deemed to be terms of limitation, but rather shall be deemed to be followed by the words “without limitation.”

**15.15. *Unfunded Status of the Plan.*** The Plan is intended to constitute an “unfunded” plan for incentive compensation. With respect to any payments not yet made to a Participant by the Company, nothing contained herein shall give any such Participant any rights that are greater than those of a general creditor of the Company. In its sole discretion, the Administrator may authorize the creation of trusts or other arrangements to meet the obligations created under the Plan to deliver the Stock or payments in lieu of or with respect to Awards hereunder; *provided, however*, that the existence of such trusts or other arrangements is consistent with the unfunded status of the Plan.

**15.16. *Governing Law.*** The Plan and all determinations made and actions taken thereunder, to the extent not otherwise governed by the Code or the laws of the United States, shall be governed by the laws of the State of Delaware, without reference to principles of conflict of laws, and construed accordingly.

**15.17. *Foreign Employees and Consultants.*** Awards may be granted to Participants who are foreign nationals or employed or providing services outside the United States, or both, on such terms and conditions different from those applicable to Awards to Employees or Consultants providing services in the United States as may, in the judgment of the Administrator, be necessary or desirable in order to recognize differences in local law or tax policy. The Administrator also may impose conditions on the exercise or vesting of Awards in order to minimize the Company’s obligation with respect to tax equalization for Employees or Consultants on assignments outside their home country.

**15.18. *Compliance with Section 409A of the Code.*** This Plan is intended to comply and shall be administered in a manner that is intended to comply with Section 409A of the Code and shall be construed and interpreted in accordance with such intent. To the extent that an Award or the payment, settlement or deferral thereof is subject to Section 409A of the Code, the Award shall be granted, paid, settled or deferred in a manner that will comply with Section 409A of the Code, including regulations or other guidance issued with respect thereto, except as otherwise determined by the Administrator. Any provision of this Plan that would cause the grant of an Award or the payment, settlement or deferral thereof to fail to satisfy Section 409A of the Code shall be amended to comply with Section 409A of the Code on a timely basis, which may be made on a retroactive basis, in accordance with regulations and other guidance issued under Section 409A of the Code.

**15.19. *Limitation of Liability.*** Notwithstanding anything to the contrary in the Plan, neither the Company, nor any Affiliate, nor the Administrator, nor any person acting on behalf of the Company, any Affiliate, or the Administrator, will be liable to any Participant or to the estate or beneficiary of any Participant or to any other holder of an Award by reason of any acceleration of income, or any additional tax (including any interest and penalties), asserted by reason of the failure of an Award to satisfy the requirements of Section 422 or Section 409A or by reason of Section 4999 of the Code, or otherwise asserted with respect to the Award; provided, that nothing in this Section 15.19 will limit the ability of the Administrator or the Company, in its discretion, to provide by separate express written agreement with a Participant for a gross-up payment or other payment in connection with any such acceleration of income or additional tax.

**15.20. No Registration Rights; No Right to Settle in Cash.** The Company has no obligation to register with any governmental body or organization (including, without limitation, the U.S. Securities and Exchange Commission (“SEC”)) any of **(a)** the offer or issuance of any Award, **(b)** any Stock issuable upon the exercise of any Award, or **(c)** the sale of any Stock issued upon exercise of any Award, regardless of whether the Company in fact undertakes to register any of the foregoing. In particular, in the event that any of **(x)** any offer or issuance of any Award, **(y)** any Stock issuable upon exercise of any Award, or **(z)** the sale of any Stock issued upon exercise of any Award are not registered with any governmental body or organization (including, without limitation, the SEC), the Company will not under any circumstance be required to settle its obligations, if any, under this Plan in cash.

**15.21. Legal Conditions on Delivery of Stock.** The Company will not be obligated to deliver any shares of Stock pursuant to the Plan or remove any restriction from shares of Stock previously delivered under the Plan until: **(i)** the Company is satisfied that all legal matters in connection with the issuance and delivery of such shares have been addressed and resolved; **(ii)** if the outstanding Stock is at the time of delivery listed on any stock exchange or national market system, the shares to be delivered have been listed or authorized to be listed on such exchange or system upon official notice of issuance; and **(iii)** all conditions of the Award have been satisfied or waived. If the sale of Stock has not been registered under the Securities Act of 1933, as amended, the Company may require, as a condition to exercise of the Award, such representations or agreements as counsel for the Company may consider appropriate to avoid violation of the Securities Act of 1933, as amended, any regulation promulgated thereunder or of any applicable state or foreign securities laws. The Company may require that certificates evidencing Stock issued under the Plan bear an appropriate legend reflecting any restriction on transfer applicable to such Stock, and the Company may hold the certificates pending lapse of the applicable restrictions.

**15.22. Waiver of Jury Trial.** By accepting an Award under the Plan, each Participant waives any right to a trial by jury in any action, proceeding or counterclaim concerning any rights under the Plan and any Award, or under any amendment, waiver, consent, instrument, document or other agreement delivered or which in the future may be delivered in connection therewith, and agrees that any such action, proceedings or counterclaim shall be tried before a court and not before a jury. By accepting an Award under the Plan, each Participant certifies that no officer, representative, or attorney of the Company has represented, expressly or otherwise, that the Company would not, in the event of any action, proceeding or counterclaim, seek to enforce the foregoing waiver.

**15.23. Establishment of Sub-Plans.** The Board may from time to time establish one or more sub-plans under the Plan for purposes of satisfying applicable federal or state securities or tax laws. The Board will establish such sub-plans by adopting supplements to the Plan setting forth **(i)** such limitations on the Administrator’s discretion under the Plan as the Board deems necessary or desirable and **(ii)** such additional terms and conditions not otherwise inconsistent with the Plan as the Board

deems necessary or desirable. All supplements adopted by the Board will be deemed to be part of the Plan, but each supplement will apply only to Participants within the affected jurisdiction and the Company will not be required to provide copies of any supplement to Participants in any jurisdiction that is not affected.

**15.24. Captions.** The captions in the Plan are for convenience of reference only, and are not intended to narrow, limit or affect the substance or interpretation of the provisions contained herein.

**EXHIBIT A**  
**Definition of Terms**

As used in the Plan, the following terms shall have the meanings set forth in this Exhibit A. Terms defined in the text of the Plan shall have the meaning ascribed to the term at the location of its definition. Any definition of a performance measure used in connection with Awards described by Sections 10 or 11 shall have the meaning commonly ascribed to such term by generally acceptable accounting principles as practiced in the United States:

**A.1. "Administrator"** The Committee or if there be no Committee, the Board.

**A.2. "Affiliate"** shall mean any corporation or other entity owning, directly or indirectly, 50% or more of the outstanding Stock of the Company, or in which the Company or any such corporation or other entity owns, directly or indirectly, 50% of the outstanding capital stock (determined by aggregate voting rights) or other voting interests.

**A.3. "Award"** shall mean any or a combination of the following: Stock Option, Stock Appreciation Right, Restricted Stock Award, Restricted Stock Unit Award, Deferred Stock, Other Share-Based Award, Performance Award Unrestricted Stock, Securities (other than Stock Options) that are convertible into or exchangeable for Stock on such terms and conditions as the Administrator determines or any other right, interest or option relating to Stock or other property (including cash) granted pursuant to the provisions of the Plan.

**A.4. "Award Agreement"** shall mean any agreement, contract or other instrument or document evidencing any Award hereunder, whether in writing or through an electronic medium.

**A.5. "Board"** shall mean the board of directors of the Company.

**A.6. "Cause"** shall mean, unless otherwise provided in an Award Agreement, **(A)** gross dereliction in the performance of the Participant's duties to the Company or any of its Affiliates if the Participant fails to cure such dereliction, if curable, within thirty (30) days after receipt from the Company of written notice specifying such dereliction; **(B)** fraud, embezzlement or theft with respect to the Company or any of its Affiliates; **(C)** material breach of a fiduciary duty owed by the Participant to the Company or any of its Affiliates; or **(D)** conviction of, or plea of *nolo contendere* to, a felony or other crime involving moral turpitude.

**A.7. "Code"** shall mean the Internal Revenue Code of 1986, as from time to time amended and in effect, or any successor statute as from time to time in effect.

**A.8. "Company"** shall mean Entegris, Inc., a Delaware corporation.

**A.9. "Committee"** shall mean the Management Development & Compensation Committee of the Board or a successor to such committee established by the Board to assist it in the oversight and determination of the Company's compensation practices, policies and programs. The Committee shall consist of no fewer than two Directors, each of whom is (i) a "Non-Employee Director" within the meaning of Rule 16b-3 of the

Exchange Act, (ii) an “outside director” within the meaning of Section 162(m) of the Code, and (iii) an “independent director” for purpose of the rules of the principal U.S. national securities exchange on which the Stock is traded, to the extent required by such rules.

**A.10.** “*Consultant*” shall mean any consultant or advisor who is a natural person and who provides services to the Company or any Affiliate, so long as such person (i) renders bona fide services that are not in connection with the offer and sale of the Company’s securities in a capital-raising transaction and (ii) does not directly or indirectly promote or maintain a market for the Company’s securities.

**A.11.** “*Covered Employee*” shall mean an employee of the Company or its Affiliates (including an employee who is also a member of the Board) who is a “covered employee” within the meaning of Section 162(m) of the Code.

**A.12.** “*Director*” shall mean a non-employee member of the Board.

**A.13.** “*Dividend Equivalents*” shall have the meaning set forth in Subsection 15.4.

**A.14.** “*Employee*” shall mean any employee of the Company or any Affiliate and any prospective employee conditioned upon, and effective not earlier than, such person becoming an employee of the Company or any Affiliate.

**A.15.** “*Exchange Act*” shall mean the Securities Exchange Act of 1934, as amended.

**A.16.** “*Fair Market Value*” shall mean, with respect to Stock as of any date, **(i)** the closing sale price of the Stock reported as having occurred on the NASDAQ or other principal U.S. national securities exchange on which the Stock is listed and traded on such date, or, if there is no such sale on that date, then on the last preceding date on which such a sale was reported; **(ii)** if the Stock is not listed on any U.S. national securities exchange but are quoted in an inter-dealer quotation system on a last sale basis, the final ask price of the Stock reported on the inter-dealer quotation system for such date, or, if there is no such sale on such date, then on the last preceding date on which a sale was reported; or **(iii)** if the Stock is neither listed on a U.S. national securities exchange nor quoted on an inter-dealer quotation system on a last sale basis, the amount determined by the Administrator to be the fair market value of the Stock as determined by the Administrator in its sole discretion, consistent with the requirements of Sections 422 and 409A of the Code, to the extent applicable. The Fair Market Value of any property other than Stock shall mean the market value of such property determined by such methods or procedures as shall be established from time to time by the Administrator.

**A.17.** “*Incentive Stock Option*” shall mean an Option which when granted is intended to qualify as an incentive stock option for purposes of Section 422 of the Code.

**A.18.** “*Limitations*” shall have the meaning set forth in Subsection 11.5.



**A.19.** “*Option*” shall mean any right granted to a Participant under the Plan allowing such Participant to purchase Stock at such price or prices and during such period or periods as the Administrator shall determine.

**A.20.** “*Other Stock-Based Award*” shall have the meaning set forth in Subsection 9.1.

**A.21.** “*Participant*” shall mean an Employee, Director or Consultant who is selected by the Administrator to receive an Award under the Plan.

**A.22.** “*Payee*” shall have the meaning set forth in Subsection 15.6.

**A.23.** “*Performance Award*” shall mean any Award of Performance Cash, Performance Stock or Performance Units granted pursuant to Section 10 which are subject to Performance Criteria. The Administrator in its discretion may grant Performance Awards that are intended to qualify for the performance-based compensation exception under Section 162(m) of the Code and Performance Awards that are not intended so to qualify.

**A.24.** “*Performance Cash*” shall mean any cash incentives granted pursuant to Section 9 payable to the Participant upon the achievement of such performance goals as the Administrator shall establish.

**A.25.** “*Performance Criteria*”: shall mean specified criteria, other than the mere continuation of employment or the mere passage of time, the satisfaction of which is a condition for the pay-out of an Award. For purposes of Performance Share Awards that are intended to qualify for the performance-based compensation exception under Section 162(m), a Performance Criterion will mean an objectively determinable measure of performance relating to any or any combination of the following (measured either absolutely or by reference to an index or indices and determined either on a consolidated basis or, as the context permits, on a divisional, subsidiary, line of business, project or geographical basis or in combinations thereof):

- Net income or improvement in net income;
- Adjusted net income or improvement in adjusted net income;
- Earnings per share or improvement in earnings per share;
- Net sales growth or improvement in net sales growth;
- Cash flow;
- Gross margin;
- Operating margin;
- Earnings before interest and taxes, EBITDA;
- Stock price;
- Return on assets or net assets;
- Operating income or improvement in operating income;
- Return on capital employed;
- Return on assets or net assets,
- Return on invested capital
- Return on equity and return on adjusted equity;
- Reductions in certain asset or cost categories; and
- Comparisons with other peer companies or industry groups or classifications with regard to one or more of the foregoing criteria.

A Performance Criterion and any targets with respect thereto determined by the Administrator need not be based upon an increase, a positive or improved result or avoidance of loss. To the extent consistent with the requirements for satisfying the performance-based compensation exception under Section 162(m), the Administrator may provide in the case of any Award intended to qualify for such exception that one or more of the Performance Criteria applicable to such Award will be adjusted in an objectively determinable manner to reflect events (for example, but without limitation, acquisitions or dispositions) occurring during the performance period that affect the applicable Performance Criterion or Criteria.”.

**A.26.** “*Performance Period*” shall mean the period established by the Administrator during which any performance goals specified by the Administrator with respect to a Performance Award are to be measured.

**A.27.** “*Performance Share*” shall mean any grant pursuant to Section 10 of a unit valued by reference to a designated number of shares of Stock, which value will be paid to the Participant upon achievement of such performance goals as the Administrator shall establish.

**A.28.** “*Performance Unit*” shall mean any grant pursuant to Section 10 of a unit valued by reference to a designated amount of cash or property other than Stock, which value will be paid to the Participant upon achievement of such performance goals during the Performance Period as the Administrator shall establish.

**A.29.** “*Permitted Assignee*” shall have the meaning set forth in Subsection 15.2.

**A.30.** “*Plan*”: The Entegris, Inc. 2010 Stock Plan, as from time to time amended and in effect.

**A.31.** “*Prior Plans*” shall mean, collectively, the Company’s 2001 Equity Incentive Plan, the Company’s Outside Directors’ Option Plan and the 2001 Non-Employee Directors’ Stock Option Plan.

**A.32.** “*Restricted Stock*” shall mean any share of Stock issued with the restriction that the holder may not sell, transfer, pledge or assign such Stock and with such other restrictions as the Administrator, in its sole discretion, may impose, which restrictions may lapse separately or in combination at such time or times, in installments or otherwise, as the Administrator may deem appropriate.

**A.33.** “*Restricted Stock Award*” shall have the meaning set forth in Subsection 8.1.

**A.34.** “*Restricted Stock Unit*” means an Award that is valued by reference to a share of Stock, which value may be paid to the Participant by delivery of cash, Stock or such other property as the Administrator shall determine, which restrictions may lapse separately or in combination at such time or times, in installments or otherwise, as the Administrator may deem appropriate.

A.35. “*Restricted Stock Unit Award*” shall have the meaning set forth in Subsection 8.1

A.36. “*Stock*” shall mean the shares of the Company’s Common Stock, \$0.01 par value per share.

A.37. “*Stock Appreciation Right*” shall mean the right granted to a Participant pursuant to Section 7.

A.38. “*Substitute Awards*” shall mean Awards granted or Stock issued by the Company in assumption of, or in substitution or exchange for, awards previously granted, or the right or obligation to make future awards, in each case by a company acquired by the Company or any Affiliate or with which the Company or any Affiliate combines.

A.39. “*Unrestricted Stock*”: An Award of Stock not subject to any restrictions under the Plan.

A.40. “*Vesting Period*” shall mean the period of time specified by the Administrator during which vesting restrictions for an Award are applicable.

**THIRD AMENDED AND RESTATED  
MEMBRANE MANUFACTURE AND SUPPLY AGREEMENT**

This Third Amended and Restated Membrane Manufacture and Supply Agreement (this "Agreement") is entered into effective as of October 13, 2009 (the "Effective Date"), between Millipore Corporation ("Millipore"), a Massachusetts corporation with its principal place of business at 290 Concord Road, Billerica, MA 01821, and Entegris, Inc. ("Entegris"), a Delaware corporation with its principal place of business at 3500 Lyman Boulevard, Chaska, MN 55318.

**RECITALS**

1. The Parties entered into an Amended and Restated Membrane Manufacture and Supply Agreement dated as of December 19, 2008 (the "Old Agreement") which among other things provided for the manufacture and supply of certain membranes that are used by and incorporated into products of both Millipore and Entegris, so as to appropriately ensure both Millipore and Entegris a continuing supply of such membranes.

2. The Old Agreement addressed Entegris' plans to move its operations out of Millipore's facility in an orderly manner. Both Parties desire to adjust the timing and related matters of such move and to coordinate such move without disruption to the mutual supply relationship between them.

3. Accordingly, the Parties wish to amend and restate certain provisions of the Old Agreement and to cancel and replace the Old Agreement as of the Effective Date with this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements set forth below, the parties hereto agree as follows:

**1. DEFINITIONS**

The following terms shall have the meanings assigned to them below whenever they are used in this Agreement including the Exhibits and Annexes hereto. Terms defined elsewhere in this Agreement shall have the meaning ascribed thereto at the location of their definition. Except where the context otherwise requires, words imparting the singular shall include the plural and vice versa, words denoting any gender shall include all genders and words denoting persons shall include bodies corporate and vice versa.

"**Affiliated Company**" of one of the parties shall mean any entity that controls, is controlled by, or is under common control with such party. As used herein, "control" means the possession, directly or indirectly, or the power to direct or cause the direction of the management and policies of such entity, whether through ownership of voting securities or other interests, by contract or otherwise.

“**Confidential Information**” shall have the meaning set forth in Section 13.1 hereof.

“**Entegris Core Business**” shall mean: (i) the **IC MANUFACTURING INDUSTRY** including companies that manufacture integrated circuits, semiconductors, semiconductor chips and other microelectronics components, flat panel displays, solar cells and fiber optic cables, optical coatings, coated optical lenses and coated optical fibers; (ii) the **IC OEM EQUIP & MATERIALS MFG. INDUSTRY** including companies that manufacture equipment for the fabrication and processing of semiconductors and integrated circuits for sale to companies in the IC Manufacturing Industry as well as companies that integrate a number of components into subsystems sold to OEM equipment manufacturers for incorporation into semiconductor fabrication equipment, as well as companies that manufacture, process and supply liquids, gases, conductive materials and other advanced materials to the IC Manufacturing Industry and which provide products and systems to purify, monitor and control atmospheric conditions in clean room manufacturing environments of the IC Manufacturing Industry; and (iii) the **IC RESEARCH LABORATORY INDUSTRY** including university, governmental and commercial laboratories and research operations that research and/or develop innovations in the structure and composition of integrated circuits, the processes and materials used to manufacture integrated circuits and new forms of integrated circuits.

“**Entegris Equipment**” shall have the meaning set forth in Section 3.1.1 hereof.

“**Entegris Permitted Persons**” shall have the meaning set forth in Exhibit B.

“**Equipment**” shall mean the Entegris Equipment and the Millipore Equipment collectively.

“**Facility Term**” shall mean the period commencing on the Effective Date and ending on June 30, 2012, or until this Agreement is terminated early in accordance with Section 6.2.

“**Flat Sheet UPE Membranes**” shall mean rollstock UPE Membranes typically less than 300 microns in sheet thickness including both phobic and philic Membranes as produced at the Premises pursuant to the Old Agreement immediately prior to the Effective Date, or as modified as provided in this Agreement.

“**Information**” shall mean business information, technical information and data, know-how, research information and data, formulae and other information, whether or not patentable or copyrightable, in written, oral, electronic or other tangible or intangible forms, stored in any medium, including studies, reports, records, books, contracts, instruments, surveys, discoveries, ideas, concepts, know-how, techniques, designs, specifications, drawings, blueprints, diagrams, models, prototypes, samples, flow charts, data, computer data, disks, diskettes, tapes, computer programs or other software,

marketing plans, customer names, communications by or to attorneys (including attorney-client privileged communications), memos and other materials prepared by attorneys or under their direction (including attorney work product), and other technical, financial, employee or business information or data.

“**Lease**” shall mean the lease of the Premises as set forth in Section 2 hereof and in the Lease terms set forth in Exhibit B hereto.

“**Machines**” shall have the meaning set forth in Section 7.1 hereof.

“**Machine Hourly Rates**” shall have them meaning set forth in Section 7.1. hereof.

“**Membranes**” shall mean UPE Membranes as well as any other membranes or materials that the parties may hereafter agree to add to this definition of Membranes.

“**Millipore Core Business**” shall mean: (i) the **BIOPHARM INDUSTRY** including pharmaceutical/biotechnology and genetic engineering companies as well as manufacturers of cosmetics, medical devices, diagnostic products and clinical analytical products; (ii) the **LAB & LIFE SCIENCE RESEARCH INDUSTRY** including government, university and private research and testing analytical laboratories for proteomic, genomic, microbiological and similar research and analysis as well as for environmental research and analysis; and (iii) the **FOOD & BEVERAGE INDUSTRY** including companies that manufacture or process foods and beverages including dairy products, beer, wine, juice and soft drink manufacturers and bottled water companies.

“**Millipore Equipment**” shall have the meaning set forth in Section 3.1.2 hereof.

“**New Entegris Facility**” shall mean the facility at a location chosen by Entegris on property not owned by Millipore to which Entegris will relocate all of its manufacturing operations from the Premises.

“**Original Contract Date**” shall mean March 31, 2001.

“**Other Flat Sheet UPE Membranes**” shall mean Flat Sheet UPE Membranes other than Treated Flat Sheet UPE Membranes. Other Flat Sheet UPE Membranes include, as of the Effective Date, those Membranes listed under the heading “Other Flat Sheet UPE Membranes” in Exhibit A hereto.

“**Other UPE Membranes**” shall mean all UPE Membranes other than Treated Flat Sheet UPE Membranes.

“**Other UPE Products**” shall mean devices or other products which include Other UPE Membranes as a material or component.

**"PFA Hollow Fiber Membranes"** shall mean tubular PFA membranes having an outer diameter in the range of 500-1000 mm and an inner diameter of 100-500 mm.

**"Premises"** shall have the meaning set forth in [Exhibit B](#).

**"Releases"** shall mean any purchase orders or other documents of purchase that Millipore may place with Entegris for UPE Membranes.

**"Rent"** shall have the meaning set forth in [Exhibit B](#).

**"Subsidiary"** of one of the parties shall mean any entity that is controlled by such party. As used herein, "control" of an entity means the possession, directly or indirectly, or the power to direct or cause the direction of the management and policies of such entity, whether through ownership of voting securities or other interests, by contract or otherwise.

**"Supplement"** shall mean the schedule of supplemental terms and conditions specifying detailed provisions to implement the contractual commitments set forth in this Agreement relating to membrane manufacturing operations and membrane manufacturing process improvements which is attached to this Agreement as **Exhibit C**.

**"Supplied Party"** shall mean a party to this Agreement that orders certain Membranes pursuant to this Agreement and to whom such Membranes are sold.

**"Supplying Party"** shall mean a party to this Agreement that manufactures certain Membranes ordered by the other party pursuant to this Agreement and that sells such Membranes to the other party.

**"Term"** or **"Term of this Agreement"** shall mean the effective period of this Agreement as set forth in Section 6 hereof.

**"Treated Entegris Membranes"** shall mean Treated Flat Sheet UPE Membranes and Treated Other Entegris Membranes.

**"Treated Entegris Products"** shall mean devices or other products which include Treated Entegris Membranes as a material or component.

**"Treated Other Entegris Membranes"** shall mean those Entegris membranes that are chemically treated using Millipore's VMF4 Line or using Millipore's patented VMF4 technology, including, as of the Effective Date, those membranes listed under the heading "Treated Other Entegris Membranes" in [Exhibit A](#) hereto.

**"Treated Flat Sheet UPE Membranes"** shall mean Flat Sheet UPE Membranes that are chemically treated using Millipore's VMF4 Line or using Millipore's patented VMF4 technology, including, as of the Effective Date, those Membranes listed under the heading "Treated Flat Sheet UPE Membranes" in [Exhibit A](#) hereto.

“**UPE Membranes**” shall mean microporous membranes produced from an ultrahigh molecular weight polyethylene material by a melt cast process, as produced pursuant to the Old Agreement at the Premises immediately prior to the Effective Date, or as modified as provided in this Agreement.

“**UPE Products**” shall mean devices or other products which include UPE Membranes as a material or component.

**1A. TRANSITION OF MANUFACTURING**

**1A.1 Move**. The parties have agreed that Entegris will move its membrane manufacturing operations currently conducted in the Premises to the New Entegris Facility in an orderly manner (the “Move”) during the Facility Term.

**1A.2 Timing; Notice**. Entegris will not move any equipment or operations sooner than July 2010. Entegris will provide to Millipore written notice (the “Move Notice” of the date on which Entegris plans to commence the Move (the “Move Date”), which Move Notice will be delivered no later than one year prior to the Move Date, but no later than June 30, 2011. Subject to the achievement of required safety stocks as described in Section 5.7, Entegris will complete the Move and have vacated the Premises no later than the end of the Facility Term. Promptly after initial delivery of the Move Notice, Entegris will prepare a detailed move schedule and provide it to Millipore. The parties will review and update the schedule during the Facility Term on a monthly basis as the Move approaches and then progresses. Millipore will supply its requirements for feasibility and qualification rolls in coordination with the schedule.

**1A.3 Coordination**. The parties will work together in good faith to facilitate such Move to minimize disruptions and costs to both parties.

**1A.4 Qualification**. Prior to the reduction or cessation of production of Membranes at the Premises, Entegris may establish its own new UPE annealing capability at the New Entegris Facility. Millipore will use its commercially reasonable efforts, in conjunction with Entegris, to qualify the Entegris’ manufacturing process at the New Entegris Facility to enable the supply of qualified Membranes. Entegris will provide to Millipore in parallel with such qualification a reasonable quantity of rolls of UPE Membrane necessary for Millipore to conduct feasibility and qualification testing. All such feasibility and evaluation rolls provided to Millipore by Entegris will meet all existing Entegris specifications as agreed by the parties. If, despite each party’s commercially reasonable efforts, Millipore is unable to qualify the Entegris UPE annealing line, Millipore reserves the right to perform the annealing process itself. In such



circumstances, Entegris shall provide to Millipore a sufficient quantity of extracted gel rolls, at appropriately adjusted prices, to enable Millipore to produce sufficient finished product to meet Entegris' obligations for such finished product.

**1A.5 No Supply Disruption.** Notwithstanding the Move, Entegris will at all times during the Term of this Agreement continue to meet its supply obligations to Millipore under this Agreement of any Membranes from a manufacturing process qualified by Millipore. It is the expectation of the parties that Entegris will produce Membranes from both facilities initially, noting that for some process operations duplicate equipment does not exist, and, after the Facility Term, if the New Entegris Facility and its processes are qualified by Millipore, solely from the New Entegris Facility.

**1A.6 No VMF4 Disruption.** Notwithstanding the Move, Millipore will at all times during the Term of this Agreement continue to meet its obligations to Entegris under this Agreement to provide hydrophilization of any Membranes on its VMF4 Line.

**1A.7 Costs.** Entegris will bear all costs of dismantling, packaging, freight, shipping, installation, testing and requalification of all Entegris Equipment to be removed from the Premises.

**1A.8 Transfer to New Annealing Line.** If Entegris' new UPE annealing process can be qualified successfully by Millipore as provided above, then after such qualification Millipore shall have Millipore membrane processed by Entegris on the new Entegris annealing machine with pricing based on the costs associated with the new machine and forego any payment for existing Film I Annealing machine hours from Entegris. Prior to any successful qualification of such new process to Millipore's reasonable satisfaction, Millipore shall have Millipore membrane continue to be processed on the existing Film I annealing machine at the Premises with Entegris continuing to be charged the same rates and pricing then in effect. Any such shifting of production shall not result in a termination of the Agreement, which may be only be terminated in accordance with its terms.

**1A.9 Offsite Storage.** The parties acknowledge that Millipore had intended to use a portion of the Premises after Entegris vacated it for storage space during anticipated renovations. Pursuant to this Agreement, the parties have agreed to extend the Facility Term. Accordingly, Millipore will, when it deems appropriate, locate and contract for storage space reasonably comparable to the Premises at an offsite facility on terms satisfactory to Millipore for its use in lieu of using the Premises as intended. As part of the inducement for Millipore to agree to the extension of the Facility Term through June 30, 2012, Entegris will reimburse Millipore for the reasonable fair market value of the portion of such offsite storage as is at least equal to 2,000 square feet of high bay warehouse space until the earlier of (i) June 30, 2012, or (ii) the date on which Entegris has fully vacated the Premises.

**2. LEASE OF THE PREMISES**

In order to enable Entegris to manufacture UPE Membranes, including Treated Flat Sheet UPE Membranes and Other Flat Sheet UPE Membranes, and Treated Other Entegris Membranes in the same production areas at Millipore’s facility at 80 Ashby Road, Bedford MA. and/or such additional, reduced or substituted areas all as described in greater detail in Exhibit B hereto, and with the same processes as such UPE Membranes and Treated Other Entegris Membranes were manufactured prior to the Effective Date (both (i) for its own use and sale and for its sale of UPE Products and (ii) for supply of Flat Sheet UPE Membranes to Millipore as provided in this Agreement), Millipore and Entegris agree to the arrangements regarding Entegris’ use of the Premises as are set forth in Exhibit B hereto for the duration of the Facility Term.

**3. OWNERSHIP AND USE OF THE EQUIPMENT**

**3.1. Ownership.** For purposes of clarification, the parties acknowledge and agree that:

**3.1.1.** All right, title and interest in and to the following major equipment currently used in the manufacture of UPE Membranes and/or Treated Other Entegris Membranes, now exists with, and is solely owned by Entegris (collectively, the “Entegris Equipment”):

<u>Item#</u>	<u>Description</u>	<u>Current Location</u>	<u>Quantity</u>
1.	Slurry Mixing Vessels	Bldg C-Mix Room	2
2.	Extrusion Line & support equipment (cranes, vents etc.)	Bldg D-101	1
3.	NZE Extractors & support equipment (scales, vents etc.)	Bldg C-103	2
4.	Release/Testing Equipment (porosimeter, flow stands, VBP stands, digital dimension equipment)	Bldg D-101	1
5.	Monomer Chemical Mixing Vessel (for philiic Flat Sheet UPE Membranes)	Bldg C-Mix Room	1
6.	MSR Batch Extractors & support equipment (cranes, LS-15, etc.)	Bldg D-101	3
7.	Release/Testing Equipment (flow stands, VBP stands, digital dimension equipment)	Bldg F-Cell 5	1
8.	CUPE Mix/recirculation Pumps	Bldg C-Mix Room	2
9.	NZE Chiller Loop (~100 Tons)	Bldg C-Roof	1
10.	Oil Mist Collector (and duct/hood)	Bldg D-101	1
11.	7 Ton Edwards Chiller	Bldg D-outside	1
12.	Tiyoda-Serec Extractor	Bldg F-Cell 5	1
13.	Tiyoda-Serec Ext 42 Ton Chiller	Bldg C-roof	1

- 3.1.2. All right, title and interest in and to any equipment other than the Entegris Equipment used in the manufacture of UPE Membranes and/or Treated Other Entegris Membranes, including the following equipment currently used in such manufacture (collectively, the "Millipore Equipment") is solely owned by Millipore:

<u>Item#</u>	<u>Description</u>	<u>Current Location</u>	<u>Quantity</u>
1.	Slurry Mix Stations; Control Modules 1-3	Bldg C -105	3
2.	Film 1 Annealing Line	Bldg. C-123	1
3.	VMF 4 Line (chemical modification)	Bldg. C-124	1
4.	Testing: Flow, Wet Time, Stability	Bldg. C-124	various
5.	Monomer Chemical Mixing Stations 4-6	Bldg. C-105	3

- 3.2. **Use of Millipore Equipment and Support.** At all times during the Facility Term, Millipore shall provide Entegris with access to and use of the Millipore Equipment, each as necessary for use in the manufacture of UPE Membranes or Treated Other Entegris Membranes in accordance with Article I of the Supplement. Entegris shall pay Millipore Machine Hourly Rates as set forth in Section 7.1 below with respect to the use of the Millipore Equipment. At all times during the Term of this Agreement Millipore will provide a reasonable level of operational assistance and general technical support assistance in resolving technical problems in UPE Membrane manufacture occurring at the Premises in accordance with Article I of the Supplement. Millipore shall be responsible for maintaining the Millipore Equipment in its current operational capability, and Entegris shall be responsible for maintaining the Entegris Equipment in its current operational capability and condition, in each case as specified in Article I of the Supplement, unless the parties agree in writing during the Term of this Agreement to alter such maintenance responsibilities. To the extent Millipore provides extraordinary services to Entegris, such services will be charged in accordance with the rate structure specified in Section 7.3 of the Agreement.

4. **MANUFACTURE OF MEMBRANES**

4.1. **Membrane Manufacturing Operations.** Millipore and Entegris agree that Membrane manufacturing operations during the Term of this Agreement shall be carried out in accordance with this Section 4 and with Article I of the Supplement.

4.2. **Guaranteed Capacity.** 4.2.1. At all times during the Term of this Agreement, Millipore agrees to have VMF4 Line capacity sufficient to handle projected phobic Membrane volumes hereunder of up to 280,000 feet (~800 hours) per quarter. If necessary and at Millipore's discretion, this capacity can be accomplished by either moving Millipore products (i.e. products other than the Membranes covered by this Agreement) to Millipore's MML hydrophilization equipment or by moving phobic Membranes covered by this Agreement to the MML hydrophilization equipment if mutually agreed upon with cost impact to be agreed upon in advance and provided that Membranes made on the MML hydrophilization equipment can be qualified successfully by Entegris.

4.2.2. At all times during the Facility Term, Millipore agrees to have (i) Film 1 Annealing Line processing capacity sufficient to handle projected phobic Membrane volumes hereunder of up to 3,200,000 feet (~1400 hours) per quarter, and (ii) mix capacity sufficient to handle up to four (4) mixes of 400 pounds each on any days on which Entegris is running its extrusion process on the Premises.

4.2.3. At all times during the Facility Term, Entegris agrees to generally schedule operations in alignment with Millipore's plan for shutdown periods and holidays. However, it is acknowledged and agreed that there will be times of high demand during the Facility Term where Entegris will be required to run the Entegris Equipment during these times. In such cases, Millipore and Entegris will mutually agree on a plan allowing for high utilization of the Entegris Equipment.

4.2.4. Subject to any new or changed restrictions imposed by the applicable air emission permit(s), Entegris agrees to have sufficient capacity, across all relevant process steps, to meet Millipore's projected demand for phobic UPE Membranes that meet agreed specifications and qualification in an amount of guaranteed capacity per each calendar quarter during the Term of this Agreement of 300,000 feet. Through mutual written agreement, this guaranteed capacity level can be reduced to 200,000 feet for a mutually agreed upon time period should Millipore's firm and forecasted releases warrant.

4.2.5. The parties agree to commence good faith discussions in the first calendar half of 2011 regarding the possibility of continuing Entegris' access to Millipore's VMF4 Line capacity beyond the Term of this Agreement on terms and conditions mutually acceptable to both parties, if any.

- 4.3. **Capacity Expansion.** Membrane manufacturing capacity will be reviewed in accordance with a mutually agreed upon schedule during the Term of this Agreement, but no less often than annually. Entegris shall be responsible to review and report on the capacity of the Entegris Equipment and Millipore shall be responsible to review and report on the capacity of the Millipore Equipment. The results of these reviews will be discussed and documented for reference and to provide a basis for capacity expansion, as may be appropriate and agreed by the parties.
- 4.4. **Manufacturing Process Improvements.** Millipore and Entegris agree to implement mutually agreeable Membrane manufacturing process improvements.
- 4.5. **End of Term Arrangements for Millipore.** Following the expiration or earlier termination of the Term of this Agreement, Millipore desires the full capabilities to manufacture (or have manufactured) UPE Membranes for its and its Affiliated Companies' use and sale, and for its and its Affiliated Companies' use in manufacturing (or having manufactured) UPE Products for sale. Accordingly, to facilitate Millipore's manufacture of UPE Membranes following the Term of this Agreement:
- 4.5.1 (i) Entegris agrees in the event that Entegris during the Term of this Agreement acquires and has installed at the Premises new equipment in replacement of the existing Extrusion Line, or otherwise determines during the Term of this Agreement, in its sole discretion, that the Extrusion Line and/or one NZE Extractor are surplus and are to be disposed of, then Entegris agrees to grant Millipore an option to purchase, prior to or at the termination of this Agreement, at their then current book values and at such other reasonable terms as the parties may agree, such surplus Extrusion Line and/or NZE Extractor. Upon consummation of any such sale transaction, Entegris agrees to leave in their then current locations at the Premises, the subject Extrusion Line and/or NZE Extractor, as the case may be. Entegris agrees to notify Millipore as to whether it is granting Millipore such an option, at least eighteen (18) months prior to the termination of this Agreement; and
- 4.5.2 In the event that the parties consummate a sale of any equipment deemed to be surplus by Entegris as specified above, Entegris agrees to provide Millipore with the know-how (including copies of all pertinent documentation) and a reasonable amount of transition assistance relating to the design, specifications, functionality, operation and maintenance of such equipment, or otherwise necessary or useful for Millipore to be able to continue the UPE Membrane manufacturing process immediately upon the termination of this Agreement, so as to be able to make or have made

UPE Membrane in the same process and of the same quality as made and supplied under this Agreement. All Entegris transition assistance time shall be charged to Millipore at the rates per person-hour calculated in accordance with Section 7.3 below.

**4.6. End of Term Arrangements for Entegris.**

To facilitate Entegris' manufacture of UPE Membranes and Treated Entegris Membranes at a different location following the expiration or earlier termination of this Agreement:

- 4.6.1.** Entegris shall remove and transport, at its own expense, the Entegris Equipment (subject to the consummation of any sale pursuant to any option to purchase certain items of such Entegris Equipment as specifically set forth in Subsection 4.5.1 above) from the Premises to a location of its choice within one-hundred eighty (180) days following such expiration or early termination. Entegris shall use its best efforts to avoid or minimize damage to the Premises or to any other part of Millipore's 80 Ashby Road facility from such removal, and shall promptly reimburse Millipore for its reasonable and actual costs of repairing any damage to the extent caused by Entegris or its agents or representatives in the process of removing the Entegris Equipment from the Premises or any other parts of such facility;
- 4.6.2.** Millipore shall provide Entegris with know-how (including copies of all pertinent documentation) and a reasonable amount of transition assistance relating to the design, specifications, functionality, operation and maintenance of the Millipore Equipment, such that Entegris can make or have made, and operate and maintain, equipment substantially equivalent or comparable to the Millipore Equipment, or successfully outsource the functions performed by the Millipore Equipment, in the manufacture of UPE Membranes and Treated Other Entegris Membranes. All Millipore transition assistance shall be charged to Entegris at the rates per person-hour calculated in accordance with Section 7.3 below; and
- 4.6.3** Millipore agrees in the event that it determines during the Term of this Agreement, in its sole discretion, that the VMF4 Line and/or the Film 1 Line are surplus and are to be disposed of, then Millipore agrees to grant Entegris an option to purchase, prior to or at the termination of this Agreement, at their then current book values and at such other reasonable terms as the parties may agree, such surplus VMF4 Line and/or the Film 1 Line. Upon consummation of any such sale transaction, Entegris shall remove and transport, at its own expense, any such purchased surplus equipment from the Premises to a location of its choice within one-hundred eighty (180) days following such expiration or early termination. Entegris shall use its best efforts to avoid or minimize damage to the Premises or to any other part of Millipore's 80 Ashby Road facility from

such removal, and shall promptly reimburse Millipore for its reasonable and actual costs of repairing any damage to the extent caused by Entegris or its agents or representatives in the process of removing such purchased surplus equipment from the Premises or any other parts of such facility. Millipore agrees to notify Entegris as to whether it is granting Entegris such an option, at least eighteen (18) months prior to the termination of this Agreement

- 4.7. **Joint Know-How.** In the event that any know-how results from or is developed in the course of the manufacture of UPE Membranes or Treated Other Entegris Membranes in the Premises during the Facility Term of this Agreement (including the use of Millipore Equipment in such manufacture), whether by employees of Millipore, employees of Entegris or jointly, such know-how shall be jointly owned by Entegris and Millipore. Millipore shall have rights to use such know-how in all fields other than the Entegris Core Business, and Entegris shall have rights to use such know-how in all fields other than the Millipore Core Business.
- 4.8. **Additional Membranes.** Entegris shall have the right to add other membranes to the list and definition of "UPE Membranes" during the Term of this Agreement, subject to (i) Millipore's approval (on grounds of safety, compliance with laws, or avoidance of damage to the Millipore Equipment, the Premises or any other parts of Millipore's 80 Ashby Road facility) of the manufacture of such additional UPE Membranes, which approval shall not be unreasonably withheld or delayed, and (ii) Millipore's having sufficient space and equipment capacity for such additional manufacture, and (iii) scheduling of use of the Millipore Equipment as shall be negotiated by the parties in good faith.
- 4.9. **Additional Equipment.** Subject to Millipore's prior approval, which approval shall not be unreasonably withheld or delayed, Entegris shall have the right to locate additional equipment within the Premises during the Facility Term to the extent related to the general manufacturing purposes already authorized.
5. **SUPPLY OF MEMBRANES**
- 5.1. **Sale of Membrane.** Entegris agrees to sell to Millipore Flat Sheet UPE Membranes, in the amounts contained in Millipore's Releases, at all times during the Term and, in the event this Agreement is terminated by Entegris pursuant to Section 6.2 (iii), at all times following the Term through and including December 31, 2012 or until any event prior thereto that would have given rise to Entegris' right to terminate this Agreement pursuant to Section 6.2 (i) or (ii). Except as set forth in Section 5.4 hereof, neither party shall have any minimum or maximum purchase requirements for any or all of such Membranes hereunder, either per order or in the aggregate.
- 5.2. **Terms of Sale.** Unless otherwise agreed by both parties in writing, this Agreement applies to all Releases placed by a Supplied Party with a Supplying

Party during the Term. The terms and conditions of this Agreement shall apply to any Release, whether or not this Agreement or its terms and conditions are expressly referenced in the Release. All Membrane shall be tested, inspected and packaged for delivery by the Supplying Party as mutually agreed by the parties.

5.3. **Priority.** Unless otherwise agreed by both parties in writing for a specific transaction, no inconsistent or additional term or condition in any Release, or in any acknowledgment, invoice or other document issued by a Supplying Party or its representative in connection with a particular purchase by a Supplied Party, shall be applicable to a transaction within the scope of this Agreement. Both parties specifically agree that any terms and conditions in any such documents which are in any way inconsistent with this Agreement shall be inapplicable, and the terms of this Agreement shall govern.

5.4. **Forecasts and Releases.**

5.4.1 Millipore will provide Entegris with a rolling one-year forecast of its demand for UPE Membranes hereunder, by calendar quarter (a "One-Year Forecast"), which will be updated on a quarterly basis, at least thirty (30) days prior to the start of each calendar quarter. The sub-forecast for the first three (3) months within any One-Year Forecast shall be referred to as a "3 Month Forecast". Millipore must provide Releases for delivery, during the three (3) months covered by any 3 Month Forecast, of UPE Membranes in at least those quantities set forth in such 3 Month Forecast. Except for such semi binding nature of the 3 Month Forecasts as described more specifically at 5.4.3 below, the One-Year Forecasts will be used for planning purposes only and are not binding. Entegris will ship UPE Membranes so as to arrive on the delivery date set forth in a Release, provided that the delivery date set forth in such Release is not less than thirty (30) days following the date Entegris receives such Release and provided that the quantities set forth in such Release, together with those in all other Releases calling for delivery during the same quarter, are not more than thirty percent (30%) greater than the quantities provided in the applicable 3 Month Forecast. For any Releases calling for quantities more than thirty percent (30%) greater than the quantities provided in such 3 Month Forecast, Entegris shall use commercially reasonable efforts to deliver such quantities within sixty (60) days following the date Entegris receives such release or as soon as practicable thereafter.

5.4.2 Within ten (10) days after receipt of each One Year Forecast, Entegris will provide a non-binding, good faith projection of its UPE Membrane manufacturing volume (broken down between philic and phobic Membranes), by calendar quarter, for the upcoming four calendar quarters. This information will be used by Millipore for budgeting of resources and revenue, and for the determination of budgeted Machine Hourly Rates for purposes of Section 7.1.2.



5.4.3 Millipore's requirements for membranes for an upcoming quarter shall be submitted to Entegris in the form of a firm forecast before the start of that quarter. Millipore shall be entitled to change the forecast without penalty or other change if the written cancellation notice is received by Entegris prior to the requested membrane lot being extruded. Millipore shall be entitled to increase volume of membrane requested during the quarter by issuing a forecast change in writing and Entegris agrees to make reasonable efforts to accommodate the requested additional volume. Actual purchase orders will be issued following lot completion in order to assure that ordered quantities match quantities available.

5.5. **Prices; Delivery and Payment Terms.** Membrane prices shall be as set forth in Section 7.5 hereof. Payment terms for the sale of Membranes hereunder shall be as set forth in Section 7.6 hereof. Delivery terms for all Membranes will be FOB 80 Ashby Road, Bedford, MA.

5.6. **Continuing Supply Discussions.** The parties agree to commence good faith discussions in the first calendar half of 2011 regarding the possibility of continuing the supply of some Membranes from Entegris to Millipore beyond the Term of this Agreement on terms and conditions mutually acceptable to both parties, if any.

5.7. **Safety Stock.**

5.7.1 Each party acknowledges that the generation of a sufficient safety stock of UPE Membrane inventory meeting specifications and produced using a qualified process (the "Safety Stock") is appropriate. Accordingly, during the Term Millipore will determine routine safety stock levels required and include sufficient membrane quantities in quarterly forecasts to achieve the desired safety stock levels.

5.7.2 Commencing in the calendar quarter immediately following Millipore's receipt of the Move Notice from Entegris, Millipore will supplement each One-Year Forecast thereafter with an extended forecast of demand which Millipore reasonably believes it will require during the six month period immediately following the Move ("Move Buffer Stock"). Entegris will review such Move Buffer Stock forecast and communicate to Millipore any concerns Entegris may have regarding its ability to produce the requested quantity. The portion of the Move Buffer Stock that has been QA released as finished rollstock will be owned and carried by Millipore. If it is agreed that Entegris will hold some of the Move Buffer Stock as gel rolls, then Entegris will own and carry such inventory until such time as it is converted to acceptable finished rollstock.

5.7.3 Entegris will not commence the Move, including the reduction or cessation of production or the movement of any Entegris Equipment, until the parties have created an inventory of Safety Stock of at least the amount of the Move Buffer Stock. Until commencement of the Move, Entegris will make all commercially reasonable efforts to maintain the Move Buffer Stock at such amount.

5.7.4 The level of existing Safety Stock as of the Effective Date is \_\_\_\_\_ feet [*UPDATE*]. The parties agree that production in any calendar quarter in excess of, or below, 200,000 feet shall increment or decrement, respectively, the amount of Safety Stock. In addition, material returns for verified quality issues related to the portions of the process controlled by Entegris will reduce the amount of Safety Stock, foot for foot. The parties will review the amount of Safety Stock on a monthly basis and will mutually determine the then current level of Safety Stock. The parties acknowledge that the Safety Stock requirements described in this section are exclusively for the benefit of Millipore's supply needs. Millipore will provide the necessary storage space for any Safety Stock, including the Move Buffer Stock, which storage space shall be outside the then current Premises.

5.7.5 Although fully treated, finished Membrane is preferable, if the parties mutually agree that it is a necessity in order to facilitate the Move, up to fifteen percent (15%) of the Move Buffer Stock may be comprised of gel rolls, which are composed of Flat Sheet UPE Membrane that has not yet been processed through the Annealing Line. Any such gel rolls shall be processed at the Premises when such rolls are actually processed.

**6. TERM AND TERMINATION**

**6.1.** The effective period of this Agreement (the "Term" or "Term of this Agreement") shall begin on the Effective Date and continue thereafter until December 31, 2012 or until earlier termination in accordance with Section 6.2. Any Release issued by a Supplied Party before the effective date of termination and in accordance with Section 5.4 hereof shall be fulfilled by the Supplying Party.

**6.2.** Either party may terminate this Agreement prior to December 31, 2012 without prejudice to any rights or liabilities accruing up to the date of termination:

- (i)** in the event of a material breach by the other party of any of the terms and conditions of this Agreement, by giving the other party written notice of such breach, provided that such breach shall not have been cured within one hundred twenty (120) days following such notice; or,
- (ii)** immediately, by written notice thereof, if any of the following events or an event analogous thereto occurs:
  - a. an adjudication has been made that the other party is bankrupt or insolvent;

- b. the other party has filed bankruptcy proceedings or has had such proceedings filed against it, except as part of a bona fide scheme for reorganization;
- c. a receiver has been appointed for all or substantially all of the property of the other party;
- d. the other party has assigned or attempted to assign this Agreement for the benefit of its creditors; or
- e. the other party has begun any proceeding for the liquidation or winding up of its business affairs; or,

(iii) at any time for convenience of the terminating party upon twenty-four (24) months prior written notice to the other party.

6.3. Termination under this Section 6 shall be in addition to and not a substitute for other rights or causes of action of the terminating party.

6.4. Termination of this Agreement shall not in any way operate so as to impair or destroy any of the rights or remedies of either party, either at law or in equity, nor shall it relieve the parties of their obligations pursuant to Sections 1, 3.1, 4.5, 4.6, 4.7, 6, 8, 9, and 13 through 16 hereof, each of which shall survive the termination or expiration of this Agreement.

## 7. PRICES AND PAYMENTS

7.1. Machine Hourly Rates. The hourly rates ("Machine Hourly Rates") for use by Entegris of Millipore's VMF4 Line, Film 1 Annealing Line and Mix Room equipment (the "Machines"), and the invoicing thereof, shall be as set forth in this Section 7.1. Machine usage (including production and research and development usage) shall be calculated in accordance with the formula set forth in **Annex 2**.

7.1.1. Machine Hourly Rates. Commencing on the Effective Date, the Machine Hourly Rates set forth in Annex 1, subject to the annual adjustments as set forth below in this Section, shall be applicable from the Effective Date through the end of the period of the Term of this Agreement. The Machine Hourly Rates shall be adjusted annually as of January 1 of each year, beginning in calendar year 2010, to reflect (i) the then most recent August-to-following-August percentage changes, up or down, in the Producer Price Index for the industry group Pharmaceutical Preparation Manufacturing (series identification number PCU325412325412), (ii) any demonstrated increases in Millipore's costs associated directly with use of the Machines hereunder and which costs are extraordinary, not presently anticipated and not reflected in the Producer Price Index used pursuant to

clause (i) above, and (iii) changes to depreciation charges as a result of capital improvements to the Machines for the production of Membranes, as set forth in Section 7.4.2; provided, however, that commencing on January 1, 2009 the Machine Hourly Rates for Millipore's VMF4 Line will not be subject to such annual changes and will remain at \$313.38 per hour for the Term of this Agreement. Machine Hourly Rates to Entegris are independent of Millipore production volumes on the Machines.

**7.1.2. Invoicing for Machine Hourly Rates.** Millipore shall be entitled to invoice Entegris monthly for Machine usage following the end of each month. The Machine Hourly Rates used for the first two months of each calendar quarter shall be the average Machine Hourly Rates that would apply for the budgeted use of each Machine for such quarter, as calculated by Millipore based on the then most recent projections provided by Entegris pursuant to Section 5.4.2 hereof. The invoice for the third month of each calendar quarter shall be adjusted to effect a "true up" to actual Machine usage by invoicing for the net difference between the Machine Hourly Rate applicable to the actual hourly usage of the Machine in question for the entire quarter multiplied times the actual hours of usage of such Machine for the quarter less the amounts invoiced for usage of such Machine for the first two months of the quarter. This "true up" is so that Entegris effectively pays for all of a quarter's hours at the Machine Hourly Rates appropriate for those total hours.

**7.2. Occupancy Rates.** Commencing on the Effective Date, rates for occupancy and use of the Premises shall be as set forth in Exhibit B.

**7.3. Support Rates.** Commencing on the Effective Date, rates for extraordinary Millipore supervisory, operational assistance and technical support (as described in Section 3.2 hereof) that are currently in use by the parties during 2005 shall be applicable from the Effective Date through December 31, 2008. Commencing on January 1, 2009, rates for extraordinary Millipore supervisory, operational assistance and technical support (as described in Section 3.2 hereof) shall be as shown in Annex 1. These rates will be adjusted annually as of January 1 of each year, beginning in calendar year 2010, to reflect (i) the then most recent August-to-following-August percentage changes, up or down, in the Producer Price Index for the industry group Pharmaceutical Preparation Manufacturing (series identification number PCU325412325412) and (ii) any demonstrated increases in Millipore's costs associated directly with providing such support hereunder and which costs are extraordinary, not presently anticipated and not reflected in the Producer Price Index used pursuant to clause (i) above.

**7.4. Impact of Capital Investment on Prices.**

**7.4.1.** Entegris shall be responsible for funding required capital improvements to the Entegris Equipment for production of hydrophobic Membranes.

Millipore shall be responsible for funding required capital improvements to the Millipore Equipment for production of hydrophilic Membranes. To the extent that capital improvements are required for the Millipore Equipment used in the production of hydrophobic Membranes, responsibility for funding that capital improvement shall be mutually agreed upon in accordance with Section I.1.7 of the Supplement. If one party funds the purchase of additional equipment for use in manufacture of UPE Membranes at the Premises, that equipment shall be owned by the funding party.

- 7.4.2. Changes to depreciation charges as a result of capital improvements to the Equipment for the production of Membranes will be reflected in the appropriate work center rates and would be part of the rate adjustment process set forth in Sections 7.1.2 and 7.3. Millipore and Entegris each agree to inform the other of capital purchases that may eventually affect proposed rate/price changes hereunder no later than the time that purchase orders for such capital purchases are placed.
- 7.4.3. Millipore shall have approval authority with respect to any Entegris proposed modifications to VMF 4 equipment for UPE Membrane processing. Millipore agrees that proposed modifications to the VMF4 equipment for non-Entegris UPE Membrane processing that could influence the processing of UPE Membranes on the VMF 4 equipment shall be reviewed with Entegris and shall be subject to mutual agreement.
- 7.4.4. Millipore shall have approval authority for any Entegris proposed modifications to Film 1 manufacturing process for UPE Membranes. Financial impact of those modifications would be mutually agreed upon prior to proceeding.
- 7.4.5. In the event of a process change to either the Film 1 or VMF4 lines, Millipore shall be responsible for change control management for any impact on Millipore products. Likewise, Entegris would be responsible for change control management for any impact on Entegris products.

7.5. **Membrane Prices.**

- 7.5.1. Intentionally Omitted.
- 7.5.2. Commencing on the Effective Date through December 31, 2009, until adjusted pursuant to Section 7.5.3, prices for Flat Sheet UPE Membranes to Millipore produced at the Premises, together with up to eight (8) rolls produced at the New Entegris Facility that are used to ascertain basic feasibility, shall be at Entegris' Manufacturing cost plus fifteen percent (15%). For Flat Sheet UPE Membranes produced at the New Entegris Facility (other than the rolls for feasibility evaluation as described and priced above), prices shall as set forth on Annex 3 for the Term of this Agreement. The parties acknowledge that all Flat Sheet UPE Membranes will be produced at the New Entegris Facility after June 30, 2012.

7.5.3. Entegris has notified Millipore as to the adjusted Manufacturing Cost to be in effect for calendar year 2009 for the Membranes to be supplied by Entegris that will be produced at the Premises and shall make available an "open-book" review of such Manufacturing Cost. Membrane Prices hereunder will be adjusted as of January 1, 2010 to reflect such adjusted Manufacturing Cost. Without limiting the factors involved in determining Manufacturing Cost, the Manufacturing Cost of UPE Membranes shall take into account the budgeted Machine Hourly Rates based on projected annual UPE Membrane manufacturing volume.

7.6. **Payment of Invoices.** All amounts payable by either party to the other pursuant to this Agreement, except for amounts payable as Rent, shall be payable within forty-five (45) days following the later of (i) receipt of ordered Membranes, performance of services or Machine usage, and (ii) receipt of invoice. All payments shall be made in U.S. Dollars. Any late payments shall be subject to interest at a rate of twelve percent (12%) per annum.

**8. NON-COMPETITION**

Except as otherwise provided in Article 5 hereof or elsewhere in this Agreement:

8.1. Millipore agrees that neither it nor any of its Affiliated Companies will (i) sell outside of the Millipore Core Business any UPE Membranes or UPE Products, or (ii) sell any UPE Membranes or UPE Products to any distributor, OEM manufacturer or other third party that has rights to, or that Millipore or any such Affiliated Company has reason to believe will, resell such UPE Membranes or UPE Products outside of the Millipore Core Business or sell other products which include UPE Membranes or UPE Products as materials or components outside of the Millipore Core Business.

8.2. Entegris agrees that neither it nor any of its Affiliated Companies will (i) sell into the Millipore Core Business any Other UPE Membranes or Other UPE Products, or (ii) sell any Other UPE Membranes or Other UPE Products to any distributor, OEM manufacturer or other third party that has rights to, or that Entegris or any such Affiliated Company has reason to believe will, resell such Other UPE Membranes or Other UPE Products into the Millipore Core Business or sell other products which include Other UPE Membranes or Other UPE Products as materials or components into the Millipore Core Business.

8.3. Intentionally Omitted.

8.4. Intentionally Omitted.

- 8.5.** Entegris agrees that neither it nor any of its Affiliated Companies will (i) sell outside of the Entegris Core Business any Treated Entegris Membranes or Treated Entegris Products, or (ii) sell any Treated Entegris Membranes or Treated Entegris Products to any distributor, OEM manufacturer or other third party that has rights to, or that Entegris or any such Affiliated Company has reason to believe will, resell such Treated Entegris Membranes or Treated Entegris Products outside of the Entegris Core Business or sell other products which include Treated Entegris Membranes or Treated Entegris Products as materials or components outside of the Entegris Core Business.
- 8.6.** In the event that either party discovers any distribution arrangements pre-existing the Original Contract Date that would conflict with the provisions of this Agreement, the parties agree that any such pre-existing arrangements shall not constitute a breach hereunder, and they further agree: (i) to use reasonable commercial efforts to cause any such terms of distribution agreements that are inconsistent with the provisions contained herein to be amended so as to be consistent with these provisions, (ii) not to amend any distribution agreements following the date of this Agreement so as to be inconsistent with such provisions, and (iii) not to renew or enter into any distribution agreements or other agreements containing terms inconsistent with the provisions contained herein following the date of this Agreement.
- 8.7.** It is acknowledged and accepted that either party or its Affiliated Companies may from time to time hereafter unintentionally make sales that would be prohibited in accordance with Sections 8.1 through 8.5 ("Sales Outside Field"). Accordingly, notwithstanding Sections 8.1 through 8.5, each party agrees not to actively market or attempt to make Sales Outside Field, *provided* that for any Sales Outside Field that are nevertheless made by and known to a party, such party shall, within forty-five (45) days following the end of each calendar year in which such Sales Outside Field were made, provide an accounting of its Gross Margins on such Sales Outside Field during such calendar year (such accounting to include the total amount of such Sales Outside Field, the total Gross Margins on such Sales Outside Field, and detail regarding the customers to which such Sales Outside Field were made) and payment of the amount of such Gross Margins to the other party. Other than such accountings, neither party shall be liable for any commission, payment, remittance, accrual or obligation or incur any other liability to the other party with respect to any such Sales Outside Field. For purposes of this Section, "Gross Margins" on a party's Sales Outside Field shall mean the sale price, net of discounts and other sales deductions, of a Membrane or product sold Outside Field, less such party's fully burdened manufacturing cost of such Membrane or product (which for Membranes purchased from the other party hereunder shall mean the price paid to the other party for such Membranes).

**9. WARRANTIES AND INDEMNIFICATION**

**9.1.** Each Supplying Party warrants to the corresponding Supplied Party that:

- (i) All Membranes supplied to the Supplied Party hereunder shall conform to the specifications for such Membranes as in effect as of the date of this Agreement and as provided to the Supplied Party, as such specifications may be amended as agreed by the parties;
- (ii) All Membranes supplied hereunder shall be free of defects in materials and workmanship; and
- (iii) It will abide by all applicable laws and regulations in manufacturing and supplying Membranes pursuant to this Agreement.

**9.2.** In the event of a breach of the foregoing warranties, the Supplying Party's sole obligation to the Supplied Party shall be to repair, replace or refund, at the Supplying Party's option, any non-conforming Membranes.

**9.3. THE SUPPLYING PARTY MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. FURTHERMORE, THE SUPPLYING PARTY SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR ANY OTHER INDIRECT DAMAGES RESULTING FROM ECONOMIC LOSS OR PROPERTY DAMAGE SUSTAINED BY THE SUPPLIED PARTY FROM THE USE OF THE SUPPLIED MEMBRANES.**

**9.4.** Each Supplying Party agrees to indemnify and hold the corresponding Supplied Party harmless from and against any claim or legal action by a third party against such Supplied Party (including reasonable attorneys' fees associated therewith) based on damages incurred as a result of property damages, personal injury or death, to the proportionate extent arising from a breach of any of the above warranties of the Supplying Party or from the Supplying Party's negligent action or omission.

**9.5.** Without limiting any other rights or remedies that a Supplied Party may have, if such Supplied Party determines that delivered Membranes do not conform to the agreed specifications for such Membranes, then such Supplied Party may reject or withdraw its acceptance thereof and shall notify the Supplying Party in writing of such nonconformity or error within thirty (30) days from receipt of such Membranes by the Supplied Party. The Supplied Party may subject any Membrane to internal testing for purposes of determining conformity to specifications. The Supplying Party shall have fifteen (15) days after receipt of written notice of nonconformity or error to replace nonconforming Membranes at the expense of the Supplying Party. If so directed by the Supplying Party, the Supplied Party shall return nonconforming Membranes to the Supplying Party's manufacturing facilities, at the Supplying Party's expense and using such carrier and such delivery dates and terms as the Supplying Party shall reasonably specify.



- 9.6. The parties agree to have their representatives meet at least once every three (3) months (unless otherwise agreed) to review compliance with the manufacturing, specifications, product quality, forecasting and delivery terms set forth in this Agreement, and to agree on any necessary corrective actions or modifications to the Supplement as then in effect.
10. **MEMBRANE MODIFICATIONS; NEW MEMBRANES.**
- 10.1. Each Supplying Party agrees that it will not substantially change the Membranes that it will supply hereunder or their formulation, manufacturing or testing processes, process equipment, other aspects of form, fit or function, or production location, unless the Supplied Party approves such change in writing, which approval may require formal validation and qualification and possibly customer notification. The implementation of any such accepted changes shall be subject to the parties' agreement on any change in price or other terms of supply as may be necessitated or requested by a party as a result of such change.
- 10.2. If any new or improved UPE Membranes result from research and development work that may be conducted by either Millipore or Entegris during the Term of this Agreement, or are requested by Millipore to be added to the supply provisions hereof, and are agreed to by Entegris, and are technically feasible for Entegris to manufacture, it is intended that such UPE Membranes be added to this Agreement both in terms of Entegris' supply to Millipore and Entegris' manufacture of such UPE Membranes, and they shall be so added to this Agreement upon agreement by the parties as to specifications and pricing, which pricing shall be consistent in methodology with the pricing hereunder.
11. **ACCESS TO FACILITIES**
- At any time during the Term, upon reasonable advance notice by a Supplied Party, such Supplied Party's authorized representatives and customers (subject to appropriate confidentiality obligations) shall be provided access to the facilities of the Supplying Party to audit or verify conformity with applicable laws and regulations and mutually agreed to quality standards. During the Facility Term of this Agreement, Millipore's authorized representatives shall be provided access to the Premises for the purpose of auditing or troubleshooting (to be coordinated with Entegris) of technical problems with UPE Membranes or their manufacture. Also, Millipore and Entegris customers (subject to appropriate confidentiality obligations and on reasonable advance notice, and for the purposes indicated above) shall be provided reasonable access, respectively, to the Premises (during the Facility Term) and to the New Entegris Facility and to the areas of Millipore's 80 Ashby Road facility where the Millipore Equipment is located and used (limited to the VMF4 Line after the Facility Term) up to the Term of this Agreement.

**12. INSURANCE RELATED TO MEMBRANES**

Each Supplying Party agrees to procure and maintain, at all times during the Term, product liability insurance with respect to the Membranes supplied by it (Broad Form Vendor's Endorsement) and contractual liability coverage, with the minimum limits of \$5,000,000 (Five Million Dollars). Each Supplying Party shall, upon request by the Supplied Party, furnish to the Supplied Party a certificate of insurance evidencing the foregoing coverage and limits. The insurance provider shall not be changed without providing the Supplied Party with ten (10) days' prior written notice.

**13. CONFIDENTIALITY**

**13.1. Confidential Information.** For the purpose of this Agreement the term "Confidential Information" means Information which is not otherwise in the public domain and of which the owner actively undertakes to restrict or control the disclosure to persons or entities other than Millipore or Entegris or their Subsidiaries in a manner reasonably intended to maintain its confidentiality, and which: **(i)** the party owning or disclosing Confidential Information ("Disclosing Party") disclosed to the non-owning party or recipient of the Confidential Information ("Receiving Party") or the Receiving Party had access to on or before the Original Contract Date; **(ii)** is contained in or referred to by this Agreement or any exhibit or annex hereto and is known to or in the possession of the Receiving Party as of the Effective Date; or **(iii)** is disclosed to the Receiving Party pursuant to this Agreement during the Term (the "Disclosure Period"). Confidential Information may include information relating to, by way of example, research, products, services, customers, markets, software, developments, inventions, manufacturing processes, designs, drawings, engineering, marketing or finances, and may be in writing, disclosed orally or learned by inspection of computer programming code, equipment or facilities. Confidential Information of third parties that is known to, in the possession of or acquired by a Receiving Party pursuant to a relationship with the Disclosing Party shall be deemed to be the Disclosing Party's Confidential Information for purposes of this Section 13.

**13.1.1. Highly Confidential Information** means Confidential Information that is technical know-how and trade secrets relating to: **(i)** Information relating to manufacturing processes or procedures with respect to devices or other products that are commercially released or for which substantial steps have been taken towards commercialization as of the Effective Date; **(ii)** Information generated by research and development activities; **(iii)** chemical and other scientific formulae used for the manufacture or treatment of membranes or other separations media or of devices or other products that are commercially released or for which substantial steps have been taken towards commercialization as of the Effective Date; or **(iv)** any other Information which Millipore and Entegris agree is Highly Confidential hereunder.

- 13.1.2. **Exclusions from Confidential Information.** Notwithstanding the foregoing provisions of this Section 13.1, Confidential Information shall exclude information that: **(i)** was in the Receiving Party's possession before receipt from the Disclosing Party and obtained from a source other than the Disclosing Party and other than through the prior relationship of the Disclosing Party and the Receiving Party before the Original Contract Date; **(ii)** is or becomes a matter of public knowledge through no fault of the Receiving Party; **(iii)** is rightfully received by the Receiving Party from a third party without a duty of confidentiality; **(iv)** is disclosed by the Disclosing Party to a third party without a duty of confidentiality on such third party; **(v)** is independently developed by the Receiving Party; or **(vi)** is publicly disclosed by the Receiving Party with the Disclosing Party's prior written approval.
- 13.2. **Confidentiality And Non-Use Obligations.** During the Confidentiality Period (as defined in Section 13.3 below), the Receiving Party shall **(i)** protect the Confidential Information of the Disclosing Party by using the same degree of care, but no less than a reasonable degree of care, to prevent the unauthorized use, dissemination, or publication of the Confidential Information as Receiving Party uses to protect its own confidential information of a like nature, **(ii)** not use such Confidential Information in violation of any use restriction herein, and **(iii)** not disclose such Confidential Information to any third party, except as expressly permitted under this Agreement or in any other agreements entered into between the parties in writing, without prior written consent of the Disclosing Party.
- 13.3. **Duration of Confidentiality Obligations.** The confidentiality obligations provided for in this Section 13 shall continue in effect for the following periods (the "Confidentiality Period"): **(i)** with respect to Confidential Information that is not Highly Confidential Information, for a period of five (5) years following either **(A)** the Effective Date with respect to Confidential Information of the Disclosing Party that is known to or in the possession of the Receiving Party as of the Effective Date or **(B)** the date of disclosure with respect to Confidential Information that was or will be disclosed by the Disclosing Party to the Receiving Party after the Effective Date but before the expiration of the Disclosure Period (as defined in Subsection 13.1 above); and **(ii)** with respect to Highly Confidential Information, in perpetuity. The obligations set forth in this Section 13 shall survive any termination of this Agreement.
- 13.4. **Compelled Disclosure.** If the Receiving Party or any of its respective Subsidiaries believes that it (i) is legally obligated to disclose, or (ii) will be compelled by a court or other authority of competent jurisdiction to disclose, Confidential Information of the Disclosing Party, it shall give the Disclosing Party

prompt written notice so that the Disclosing Party may take steps to oppose such disclosure and cooperate with the Disclosing Party in its attempts to oppose such disclosure. If the Receiving Party complies with the preceding sentence, it shall not be prohibited from complying with such requirement to disclose, but shall take all reasonable steps to make such disclosure subject to a suitable protective order or otherwise to prevent unrestricted or public disclosure.

13.5. **No Restriction on Disclosing Party.** Nothing in this Section 13 shall restrict the Disclosing Party from using, disclosing, or disseminating its own Confidential Information in any way.

13.6. **Disclaimer of Warranties as to Confidential Information.** EACH PARTY ACKNOWLEDGES AND AGREES THAT ALL CONFIDENTIAL INFORMATION IS PROVIDED ON AN "AS IS, WHERE IS" BASIS AND THAT NEITHER PARTY NOR ANY OF ITS SUBSIDIARIES HAS MADE OR WILL MAKE ANY WARRANTY WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ENFORCEABILITY OR NON-INFRINGEMENT.

14. **NO OTHER RIGHTS**

Neither party shall have any rights hereunder to any patents or other intellectual property of the other party, except as specifically set forth herein. Without limiting the generality of the foregoing, neither party shall have any rights to use any trademarks of the other party for any purpose in connection with the Membranes to be manufactured or supplied hereunder.

15. **DISPUTE RESOLUTION**

15.1. **Discussion of Parties.** In the event of a dispute between the parties arising out of or related to this Agreement (the "Dispute"), a party seeking to resolve the Dispute shall give written notice to the other party, describing briefly the nature of the Dispute and its claim and identifying an individual with authority to settle the Dispute on its behalf. The party receiving such notice shall have five (5) business days within which to designate, in a written notice given to the initiating party, an individual with authority to settle the Dispute on its behalf. Neither of such authorized individuals shall have had direct substantive involvement in the matters involved in the Dispute. The authorized individuals shall make such investigation as they deem appropriate and thereafter promptly (but in no event later than thirty (30) days from the date of the initiating party's notice) shall commence discussions concerning resolution of the Dispute.

15.2. If the Dispute has not been resolved within thirty (30) days from the commencement of discussions, it shall be submitted to final and binding arbitration under the then current Commercial Arbitration Rules of the

American Arbitration Association ("AAA"), by one (1) arbitrator in Boston, Massachusetts. Such arbitrator shall be selected by the mutual agreement of the parties or, failing such agreement, shall be selected according to the aforesaid AAA rules. The arbitrator will be instructed to prepare and deliver a written, reasoned opinion stating its decision within thirty (30) days of the completion of the arbitration. The prevailing party in such arbitration shall be entitled to expenses, including costs and reasonable attorneys' and other professional fees, incurred in connection with the arbitration. The decision of the arbitrator shall be final and non-appealable and may be enforced in any court of competent jurisdiction.

15.3. **Continuity of Service and Performance.** Unless otherwise agreed in writing, the parties will continue to provide service and honor all other commitments under this Agreement during the course of dispute resolution pursuant to the provisions of this Section 15 with respect to all matters not subject to such dispute, controversy or claim.

16. **GENERAL PROVISIONS**

16.1. **Notices.** Any notice or other communication required or permitted to be given by either party pursuant to the terms of this Agreement shall be in writing and shall be deemed given if and when delivered by hand or sent by certified mail, return receipt requested, overnight courier, confirmed telecopy, or confirmed electronic mail transmission, addressed as follows:

If to Millipore:	Millipore Corporation 290 Concord Road Billerica, MA 01821 Attn: Vice President, Global Operations Fax: (978) 715-1385
with a copy to:	Millipore Corporation 290 Concord Road Billerica, MA 01821 Attn: General Counsel Fax: (978) 715-1382
If to Entegris:	Entegris, Inc. 129 Concord Road Billerica, MA 01821 Attn: Ex. VP & COO Fax: (978) 436-6739
with a copy to:	Entegris, Inc. 129 Concord Road Billerica, MA 01821 Attn: General Counsel Fax: (978) 436-6739

or to such electronic mail address as may be specified by an addressee party to the other party by one of the other means provided above, or to such other address, telecopy number or electronic mail address as may be specified by an addressee party to the other by one of the means provided above.

- 16.2. **Force Majeure.** The obligations of a party under this Agreement will be suspended to the extent that it is wholly or partially precluded from complying with its obligations under this Agreement by force majeure. Force majeure includes, but is not restricted to, fire, storm, flood, earthquake, explosion, accident, act of the public enemy, war, rebellion, insurrection, sabotage, epidemic, quarantine restriction, labor dispute, labor shortage, transportation embargo or failure or delay in transportation, act of God, act (including laws, regulations, disapprovals or failure to approve) of any government agency, whether national, municipal, or otherwise. During the existence of any such force majeure condition, the affected party shall nevertheless use its best efforts to remove the cause thereof.
- 16.3. **Entire Agreement; Old Agreement.** This Agreement, including Exhibits A, B, and C and Annexes 1 and 2, attached hereto, is the entire agreement between the parties with respect to the subject matter hereof, and supersedes any prior negotiations and agreements or understandings and any contemporaneous oral agreements or understandings with respect to the subject matter hereof. Without limiting the generality of the foregoing, the Old Agreement shall be deemed replaced in its entirety by this Agreement as of the Effective Date, provided that the Old Agreement shall continue to apply to all activities or events that occurred prior to the Effective Date.
- 16.4. **Governing Law.** This Agreement shall be construed in accordance with and all Disputes hereunder shall be governed by the laws of the Commonwealth of Massachusetts as applied to transactions taking place wholly within Massachusetts between Massachusetts residents. The Superior Court of Middlesex County and/or the United States District Court for the District of Massachusetts shall have jurisdiction and venue over all Disputes between the parties that are permitted to be brought in a court of law pursuant to Section 15 above.
- 16.5. **Counterparts.** This Agreement and the Exhibits and Annexes hereto and the other documents referred to herein, may be executed in counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same agreement.

- 16.6. Binding Effect; Assignment.** This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective legal representatives and successors, and nothing in this Agreement, express or implied, is intended to confer upon any other person any rights or remedies of any nature whatsoever under or by reason of this Agreement. Neither party may assign this Agreement or any rights or obligations hereunder, without the prior written consent of the other party, and any such assignment shall be void. Notwithstanding the foregoing, either party may assign this Agreement and all (but not less than all) of its rights and obligations hereunder to a purchaser or transferee of, or other successor to, substantially all of its business.
- 16.7. Severability.** If any term or other provision of this Agreement or the Exhibits or Annexes attached hereto is determined by a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that transactions contemplated hereby are fulfilled to the fullest extent possible.
- 16.8. Failure or Indulgence Not Waiver; Remedies Cumulative.** No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement or the Exhibits and Annexes attached hereto are cumulative to, and not exclusive of, any rights or remedies otherwise available.
- 16.9. Amendment.** No change or amendment will be made to this Agreement or the Exhibits or Annexes attached hereto except by an instrument in writing signed on behalf of each of the parties to such agreement.
- 16.10. Authority.** Each of the parties hereto represents to the other that **(a)** it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, **(b)** the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other actions, **(c)** it has duly and validly executed and delivered this Agreement, and **(d)** this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

16.11. **Interpretation.** The headings contained in this Agreement or in any Exhibit hereto are for reference purposes only and shall not be conclusive as to the meaning or interpretation of this Agreement. When a reference is made in this Agreement to a Section, Exhibit or Annex, such reference shall be to a Section, Exhibit or Annex of this Agreement unless otherwise indicated.

16.12. **Exhibits and Annexes.** This Agreement includes the following Exhibits and Annexes, each of which constitutes an integral component part of this Agreement:

<b>Exhibit A.</b>	Membranes Covered by Agreement
<b>Exhibit B</b>	Lease Terms including Attachment A
<b>Exhibit C</b>	The Supplement
<b>Annex 1</b>	Machine Hourly Rates and Support Rates
<b>Annex 2</b>	Formula for Calculating Machine Usage Hours
<b>Annex 3</b>	Membrane Prices from New Entegris Facility

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives effective as of the Effective Date.

**MILLIPORE CORPORATION**

By: /s/ Peter C. Kershaw  
Name: Peter C. Kershaw  
Title: Corporate Vice President,  
Global Operations

**ENTEGRIS, INC.**

By: /s/ Bertrand Loy  
Name: Bertrand Loy  
Title: Executive Vice President and  
Chief Operating Officer



## Subsidiaries of Entegris, Inc.

Name of Subsidiary	Jurisdiction
Entegris Asia LLC	Delaware
Entegris Singapore Pte. Ltd.	Singapore
Entegris Pte. Ltd.	Singapore
Entegris Korea Ltd.	South Korea
Entegris Taiwan Technologies Co., Ltd.	Taiwan
Pureline Co., Ltd. (1)	South Korea
Entegris Pacific Ltd.	Delaware
Entegris (Shanghai) Microelectronics Trading Company Ltd.	Peoples Republic of China
Entegris International Holdings B.V.	The Netherlands
Entegris GmbH (2)	Germany
Entegris (UK) Ltd.	United Kingdom
Entegris Ireland Ltd.	Ireland
Entegris SAS	France
Entegris Israel Ltd.	Israel
Entegris Materials Integrity India Private Limited	India
Entegris Cleaning Process (ECP) SAS	France
Nihon Entegris K.K.	Japan
Entegris Malaysia Sdn. Bhd.	Malaysia
Entegris Precision Technology Corp.(3)	Taiwan
Entegris Logistics, Inc.	Delaware
Entegris Materials, Inc.	Delaware
Entegris Specialty Materials, LLC	Delaware
Poco Graphite, Inc.	Delaware
Poco Graphite International, Inc.	Delaware
Poco Graphite SARL (4)	France

- (1) Owned 62% by Entegris Asia LLC and 8% by Entegris Korea Ltd.
- (2) Owned 90% by Entegris International Holdings B.V. and 10% by registrant
- (3) Denotes a joint venture company of which registrant owns 50% of the voting equity
- (4) Owned 90% by Poco Graphite, Inc. and 10% by Poco Graphite International, Inc.

**Consent of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders  
Entegris, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-160212 and 333-105962) on Form S-3 and (Nos. 333-127599 and 333-53382) on Form S-8 of Entegris, Inc. of our report dated February 25, 2010, with respect to the consolidated balance sheets of Entegris, Inc. as of December 31, 2009 and 2008, and the related consolidated statements of operations, equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended December 31, 2009 and the effectiveness of internal control over financial reporting as of December 31, 2009, which report appears in the December 31, 2009 annual report on Form 10-K of Entegris, Inc.

/s/ KPMG LLP

Minneapolis, Minnesota  
February 25, 2010

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Directors and Officers of **Entegris, Inc.** (the "Corporation"), do hereby constitute and appoint Gideon Argov, Bertrand Loy, Gregory B. Graves and Peter W. Walcott and each of them individually, their true and lawful attorneys and agents to execute on behalf of the Corporation the Form 10-K Annual Report of the Corporation for the fiscal year ended December 31, 2009, together with all such amendments thereto on Form 10-K/A as well as additional instruments related thereto which such attorneys and agents may deem to be necessary and desirable to enable the Corporation to comply with the requirements of the Securities Exchange Act of 1934, as amended, and any regulations, orders, or other requirements of the United States Securities and Exchange Commission thereunder in connection with the preparation and filing of said documents, including specifically, but without limitation of the foregoing, power and authority to sign the names of each of such Directors and Officers on his behalf, as such Director or Officer, as indicated below to the said Form 10-K Annual Report or documents filed or to be filed as a part of or in connection with such Form 10-K Annual Report; and each of the undersigned hereby ratifies and confirms all that said attorneys and agents shall do or cause to be done by virtue thereof.

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ GIDEON ARGOV</u> Gideon Argov	President, Chief Executive Officer and Director	February 24, 2010
<u>/s/ ROGER D. MCDANIEL</u> Roger D. McDaniel	Chairman of the Board and Director	February 24, 2010
<u>/s/ MICHAEL A. BRADLEY</u> Michael A. Bradley	Director	February 24, 2010
<u>/s/ MICHAEL P.C. CARNES</u> Michael P.C. Carnes	Director	February 24, 2010
<u>/s/ DANIEL W. CHRISTMAN</u> Daniel W. Christman	Director	February 24, 2010
<u>/s/ GARY F. KLINGL</u> Gary F. Klingl	Director	February 24, 2010
<u>/s/ PAUL L.H. OLSON</u> Paul L.H. Olson	Director	February 24, 2010
<u>/s/ BRIAN F. SULLIVAN</u> Brian F. Sullivan	Director	February 24, 2010

## CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gideon Argov, certify that:

1. I have reviewed this Annual Report on Form 10-K of Entegris, Inc.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects, the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 25, 2010

/s/ Gideon Argov

Gideon Argov  
Chief Executive Officer  
(Principal Executive Officer)

## CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gregory B. Graves, certify that:

1. I have reviewed this Annual Report on Form 10-K of Entegris, Inc.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects, the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 25, 2010

/s/ Gregory B. Graves

Gregory B. Graves  
Chief Financial Officer  
(Principal Financial Officer)

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906  
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K (the "Report") of Entegris, Inc, a Delaware corporation (the "Company"), for the fiscal year ended December 31, 2009 as filed with the Securities and Exchange Commission on the date hereof, I, Gideon Argov, Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 25, 2010

/s/ Gideon Argov

Gideon Argov

Chief Executive Officer

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906  
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K (the "Report") of Entegris, Inc, a Delaware corporation (the "Company"), for the fiscal year ended December 31, 2009 as filed with the Securities and Exchange Commission on the date hereof, I, Gregory B. Graves, Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 25, 2010

/s/ Gregory B. Graves

Gregory B. Graves  
Chief Financial Officer