CALGON CARBON Corp
Form 10-K
February 26, 2016
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

x **Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.**

For the fiscal year ended December 31, 2015

or

o **Transition Report Pursuant to Section 12 or 15(d) of the Securities Exchange Act of 1934.**

For the transition period from to .

Commission file number 1-10776

Calgon Carbon Corporation

(Exact name of registrant as specified in its charter)

Delaware	**25-0530110**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
3000 GSK Drive **Moon Township, Pennsylvania**	**15108**
(Address of principal executive offices)	(Zip Code)

Registrant s telephone number, including area code: **(412) 787-6700**

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

Title of each class	**Name of each exchange on which registered**
Common Stock, par value $0.01 per share	New York Stock Exchange

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

None

(Title of class)

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

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

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 x No o

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o

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

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.

Large accelerated filer x	Accelerated filer o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

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

As of February 15, 2016, there were outstanding 50,512,441 shares of Common Stock, par value of $0.01 per share.

The aggregate market value of the voting stock held by non-affiliates as of June 30, 2015 was $931,610,824.92. The closing price of the Company s common stock on June 30, 2015, as reported on the New York Stock Exchange was $19.38.

The following documents have been incorporated by reference:

Document	**Form 10-K Part Number**
Proxy Statement filed pursuant to Regulation 14A in connection with registrant s Annual Meeting of Stockholders to be held on May 3, 2016	III

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Forward-Looking Information Safe Harbor

This Annual Report contains historical information and forward-looking statements. Forward-looking statements typically contain words such as expect, believes, estimates, anticipates, or similar words indicating that future outcomes are uncertain. Statements looking forward in time, including statements regarding future growth and profitability, price increases, cost savings, broader product lines, enhanced competitive posture and acquisitions, are included in this Annual Report pursuant to the safe harbor provision of the Private Securities Litigation Reform Act of 1995. These forward-looking statements involve known and unknown risks and uncertainties that may cause Calgon Carbon Corporation s (the Company) actual results in future periods to be materially different from any future performance suggested herein. Further, the Company operates in an industry sector where securities values may be volatile and may be influenced by economic and other factors beyond the Company s control. Some of the factors that could affect future performance of the Company are changes in, or delays in the enactment of, regulations that cause a market for our products, costs of imports and related tariffs, changes in foreign currency exchange rates, higher energy and raw material costs, planned and unplanned shutdowns of one or more facilities, availability of capital and environmental requirements as they relate both to our operations and our customers, competitive technologies and businesses, global political and economic developments, potential failure to innovate, labor relations, the cyclical nature of our equipment segment, validity of patents and other intellectual property, potential goodwill impairment and pension costs. In the context of the forward-looking information provided in this Annual Report, please refer to the discussions of risk factors and other information detailed in, as well as the other information contained in this Annual Report. Any forward-looking statement speaks only as of the date on which such statement is made and the Company does not intend to correct or update any forward-looking statements, whether as a result of new information, future events or otherwise, unless required to do so by the Federal securities laws of the United States.

In reviewing any agreements incorporated by reference in this Form 10-K, please remember such agreements are included to provide information regarding the terms of such agreements and are not intended to provide any other factual or disclosure information about the Company. The agreements may contain representations and warranties by the Company, which should not in all instances be treated as categorical statements of fact, but rather as a way of allocating the risk to one of the parties should those statements prove to be inaccurate. The representation and warranties were made only as of the date of the relevant agreement or such other date or dates as may be specified in such agreement and are subject to more recent developments. Accordingly, these representations and warranties alone may not describe the actual state of affairs as of the date they were made or at any other time.

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PART I

Item 1. Business:

The Company

Calgon Carbon Corporation (the Company) is a global leader in the manufacture, supply, reactivation, and application of activated carbons and the manufacture of ballast water treatment (BWT), ultraviolet (UV) light disinfection, and advanced ion-exchange (IX) technologies. These technologies are applied by customers around the world for the treatment of drinking water, wastewater, ballast water, air emissions, and a variety of industrial and commercial manufacturing processes.

The Company was organized as a Delaware corporation in 1967.

Products and Services

The Company offers a diverse range of products, services, and equipment specifically developed for the purification, separation, and concentration of liquids, gases, and other media through its three reportable business segments: Activated Carbon and Service, Equipment, and Consumer. The Activated Carbon and Service segment manufactures and markets granular and powdered activated carbon for use in more than 700 distinct market applications that remove organic compounds from water, air, and other liquids and gases. The Service aspect of this segment consists of carbon reactivation and the leasing, monitoring and maintenance of carbon adsorption equipment. The Equipment segment provides solutions to customers air, water and other liquid purification problems through the design, fabrication, installation and sale of equipment systems that utilize one or more of the Company s enabling technologies: carbon adsorption, UV light (for BWT, drinking water, and wastewater), and advanced IX technologies. The Consumer segment supplies activated carbon cloth for use in medical, military, and industrial applications.

For further information, refer to Note 18 to the consolidated financial statements in Item 8 of this Annual Report.

Activated Carbon and Service. The sale of activated carbon is the principal component of the Activated Carbon and Service business segment. The Company is the world s largest manufacturer of granular activated carbon products and sells more than 100 types of granular, powdered, and pelletized activated carbons made from coal, wood or coconut. Activated carbon is a porous material that removes organic compounds from liquids and gases by a process known as adsorption. In adsorption, undesirable organic molecules contained in a liquid or gas are attracted and bound to the surface of the pores of the activated carbon as the liquid or gas is passed through.

The primary raw material used in the production of the Company s activated carbons is bituminous coal, which is crushed, sized and then processed in rotary kilns followed by high temperature furnaces. This heating process is known as activation and develops the pore structure of the carbon. Through adjustments in the activation process, pores of the required size and number are developed for a particular purification application. The Company s technological expertise in adjusting the pore structure in the activation process has been one of a number of factors enabling the Company to develop many special types of activated carbon available in several particle sizes. The Company also markets activated carbons from other raw materials, including coconut shell and wood.

The Company produces and sells a broad range of activated, impregnated or acid washed carbons in granular, powdered or pellet form. Granular Activated Carbon (GAC) particles are irregular in shape and generally used in fixed filter beds for continuous flow purification processes. Powdered Activated Carbon (PAC) is carbon that has been pulverized into powder and is often used in batch purification processes, in municipal water treatment applications and for flue gas emissions control. Pelletized activated carbons are extruded particles, cylindrical in shape, and are typically used for gas phase applications due to the low pressure drop, high mechanical strength, and low dust content of the product.

Another important component of the Activated Carbon and Service business segment is the optional services that the Company makes available to purchasers of its products and systems. The Company offers a variety of treatment services for customers including carbon supply, equipment leasing, installation and demobilization, transportation, and spent carbon reactivation. Other services include feasibility testing, process design, performance monitoring, and major maintenance of Company-owned adsorption equipment.

Spent carbon reactivation and re-supply is a key focus of the Company s service business. In the reactivation process, the spent GAC is subjected to high temperature remanufacturing conditions that destroy the adsorbed organics and ensure that the activated

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carbon is returned to usable quality. The Company is permitted to handle and reactivate spent carbons containing hazardous and non-hazardous organic compounds.

The Company s custom reactivation process for U.S. municipal drinking water treatment plants is specially tailored to meet the unique demands of the drinking water industry. Activated carbon reactivation for use in drinking water treatment facilities in the United States must adhere to requirements of the American Water Works Association (AWWA) standard B605. Perhaps the most important requirement of this standard is that the reactivator must return to the municipality/water provider its own activated carbon that has been reactivated. Unlike industrial activated carbon reactivation practiced by a number of carbon companies, where carbons from different customers can be co-mingled and reactivated as a pooled material, drinking water carbons are kept carefully segregated. This means that a drinking water provider s activated carbon is kept separate not only from industrial customers carbons, but from other drinking water providers carbons as well, to avoid any potential cross-contamination. The Company maintains the integrity of each drinking water provider s carbon, and its potable reactivation facilities and procedures strictly adhere to AWWA B605. The Company s Blue Lake, California, Columbus, Ohio, North Tonawanda, New York, and Gila Bend, Arizona plants have received certification from the National Sanitation Foundation International (NSF) under NSF/ANSI Standard 61: Drinking Water System Components - Health Effects for custom reactivated carbon for potable water applications. NSF International is an independent, not-for-profit organization committed to protecting and improving public health and the environment.

European custom reactivation process maintains the segregation of drinking water provider s activated carbon and ensures returned product fulfills the requirements of European Standard EN12015 as well as specific additional requirements as found in the United Kingdom Drinking Water Inspectorate (DWI) approval list of products and in the KIWA-ATA certification. Custom reactivation for European municipal drinking water treatment plants is performed in reactivation facilities accredited ISO9001 and ISO14001 for Quality and Environmental management systems. The site in Feluy, Belgium, is the only carbon reactivation facility in the world with ISO22000 accreditation, for Food Safety Management System (FSMS).

The Company s carbon reactivation is conducted at numerous locations throughout the world. Granular carbon reactivation is valuable to a customer for both environmental and economic reasons, allowing them to re-use carbon cost effectively without purchasing expensive new carbon and, at the same time, protecting natural resources. The Company provides reactivation/recycling services in packages ranging from a fifty-five gallon drum to truckload quantities.

Transportation services are offered via bulk activated carbon deliveries and spent carbon returns through the Company s private fleet of trailers, capable of transporting both hazardous and non-hazardous material. The Company will arrange transportation for smaller volumes of activated carbon in appropriate containers and small returnable equipment through a network of less-than-truckload carriers.

Sales for the Activated Carbon and Service segment were $486.5 million, $498.2 million, and $482.3 million for the years ended December 31, 2015, 2014, and 2013, respectively.

Equipment. Along with providing activated carbon products, the Company has developed a portfolio of standardized, pre-engineered, adsorption systems for both liquid and vapor applications which can be quickly delivered and easily installed at treatment sites. Liquid phase equipment systems are used for potable water treatment, process purification, wastewater treatment, groundwater remediation, and de-chlorination. Vapor phase equipment systems are used to control volatile organic compound (VOC) emissions, off gases from air strippers, and landfill gas production.

The proprietary ISEP® (Ionic Separator) and CSEP® (Chromatographic Separator) units are used for the purification, separation and recovery of many products in the food, pharmaceutical, mining, chemical, and biotechnology industries. The ISEP® and CSEP® Continuous Separator units perform ion exchange and chromatographic separations using countercurrent processing. The ISEP® and CSEP® systems are currently used at over 600 installations worldwide in more than 40 applications in industrial settings, as well as in selected environmental applications including perchlorate and nitrate removal from drinking water. The core technology of the ISEP® and CSEP® systems is the proprietary rotary distribution valve offered with a turntable for movement of media vessels. In addition, recent advances in rotary distribution valve design has enabled the Company to offer ISEP®and CSEP® technology without a turntable by simulating the movement of media vessels, while keeping all the process and design advantages of the technology.

More than 30 years ago, a predecessor of the Company introduced an advanced UV oxidation process to remediate contaminated groundwater. In 1998, the Company s scientists invented a UV disinfection process that could be used to inactivate Cryptosporidium, Giardia and other similar pathogens in surface water, rendering them harmless to humans. The UV light alters the DNA of pathogens, killing them or making it impossible for the pathogens to reproduce and infect humans. In combination with hydrogen peroxide, UV light is effective in destroying many contaminants common in groundwater remediation applications. The Company participates in the marketplace for innovative UV technologies with the Sentinel® line designed to protect municipal drinking water supplies from

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pathogens, the C3 Series open-channel wastewater disinfection product line for municipal wastewater disinfection, and Rayox® UV advanced oxidation equipment for treatment of contaminants in groundwater, process water, and industrial wastewater.

UV oxidation equipment can also be combined with activated carbon to provide effective solutions for taste and odor removal in municipal drinking water and for water reuse. Backed by years of experience and extensive research and development, the Company can recommend the best solution for taste and odor problems, whether using activated carbon, UV oxidation, or both. The Company also offers a low cost, non-chemical solution utilizing activated carbon called Peroxcarb for quenching excess peroxide upon completion of the advanced oxidation processes.

In January 2010, the Company purchased Hyde Marine, Inc. (Hyde Marine). More than a decade ago, Hyde Marine began developing a combination filtration/UV disinfection solution to fight the spread of non-indigenous aquatic organisms. Invasion of non-native species via ballast water is considered to be one of the greatest threats to the world s waterways and marine environment.

The Hyde GUARDIAN® System was developed as an easy-to-use, cost-effective, and chemical-free ballast water management solution. The International Maritime Organization (IMO) type approved system meets the needs of ship owners committed to operating their vessels in a responsible, sustainable, and economic way through its proven reliability, flexible design, and low operating costs. The robust design includes an efficient, auto-backflushing filter, which removes sediment and larger plankton, and a powerful UV disinfection system that destroys or inactivates the smaller organisms and bacteria.

Sales for the Equipment segment were $39.3 million, $45.3 million, and $54.9 million for the years ended December 31, 2015, 2014, and 2013, respectively.

Consumer. The primary product offered in the Consumer segment is carbon cloth. Carbon cloth, which is activated carbon in cloth form, is manufactured in the United Kingdom and sold to the medical, military, and specialty markets. First developed in the 1970 s, activated carbon cloth was originally used in military clothing and masks to protect wearers against nuclear, biological and chemical agents. Today, activated carbon cloth can be used in numerous additional applications, including sensor protection, filters for ostomy bags, wound dressings, conservation of artifacts, and respiratory masks.

Sales for the Consumer segment were $9.2 million, $11.6 million, and $10.7 million for the years ended December 31, 2015, 2014, and 2013, respectively.

Markets

The Company participates in six primary markets: Potable Water, Industrial Process, Environmental Water, Environmental Air, Food, and Specialty Markets. Potable Water applications include municipal drinking water treatment as well as point of entry and point of use devices. Applications in the Industrial Process Market include catalysis, product recovery and purification of chemicals and pharmaceuticals, as well as process water treatment. The major applications for the two Environmental markets include wastewater treatment, groundwater remediation, ballast water treatment, VOC removal from vapors, and mercury control in flue gas streams. Food applications include brewing, bottling, and sweetener purification. Medical, personal protection (military and industrial), automotive, consumer, and precious metals applications comprise the Specialty Market.

Potable Water Market. The Company sells activated carbons, equipment, custom reactivation services, ion exchange technology, and UV technologies to municipalities for the treatment of potable water. The activated carbon adsorption technology is used to remove disinfection by-products precursors, pesticides and other dissolved organic material to meet or exceed current regulations and to remove tastes and odors to make the water acceptable to the public. The Company also sells to original equipment manufacturers (OEMs) of home water purification systems. Granular and powdered activated carbon products are sold in this market and in many cases the granular activated carbon functions both as the primary filtration media as well as an adsorption media to remove contaminants from the water. Ion exchange resins are sold in both fixed beds and continuous counter-current operations to meet strict regulatory guidelines for perchlorate in water. UV advanced oxidation systems are sold for the destruction of waterborne contaminants, and UV disinfection systems are sold for the inactivation of pathogens in surface water.

Industrial Process Market. In industrial processing, the Company s products are used either for purification, separation or concentration of customers products in the manufacturing process. The Company sells a wide range of activated carbons to the chemical, petroleum refining, and process industries for the purification of organic and inorganic chemicals, amine, antibiotics, and vitamins. Activated carbon products and services are also used to decolorize chemicals such as hydrochloric acid. Further, activated carbon is used in treatment of natural gas, biogas and other high purity gases to remove unwanted contamination. The liquefied natural gas industry uses activated carbons to remove mercury compounds that would otherwise corrode process equipment. Activated carbons are also sold for gasoline vapor recovery equipment. The Company s advanced ion exchange technology is used for a variety

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of industrial processes including separation and recovery in hydrometallurgy applications, decolorization in pulp and paper, the production of organic and inorganic chemicals, and the purification of brine.

Environmental Water and Air Markets. The Company offers its products and services to assist various industries in meeting the stringent environmental requirements imposed by various government entities. Products used for wastewater and ballast water treatment, the cleanup of contaminated groundwater, surface impoundments, and accidental spills comprise a significant need in this market. The Company provides products and services employing both activated carbon adsorption and UV technologies for emergency and temporary cleanup services as well as for permanent installations.

The Company s reactivation/recycle service is an especially important element if the customer has contaminants that are hazardous organic chemicals. Reactivation of spent carbon protects the environment and eliminates the customers expense and difficulty in securing disposal options (such as landfills) for hazardous organic chemicals.

Activated carbon is also used in the chemical, pharmaceutical, and refining industries for purification of air discharge to remove contaminants such as benzene, toluene, and other volatile organics. In addition, reduction of mercury emissions from coal-fired power plants is a significant market for the Company. As a response to this market opportunity, the Company has made significant investments at its Catlettsburg, Kentucky plant, which included enhancements to one of its production lines and pulverization equipment to produce FLUEPAC® powdered activated carbons to serve the needs of coal-fired power plants.

The Company s Rayox® UV System is an industry staple for the destruction of groundwater pollutants. Rayox® is also used for the removal of alcohol, phenol and acetone in process water and total organic compound (TOC) reduction in wastewater treatment.

The Hyde Marine ballast water treatment system is a fully automated system that can be integrated into a ship s ballast control system. The compact design can be skid mounted for new construction or can be made modular for easy installation in crowded machinery spaces on existing vessels. The Hyde GUARDIAN® and Hyde GUARDIAN Systems are complete ballast water management solutions for a variety of vessels including cruise ships, cargo and container ships, offshore supply vessels, and military vessels.

Food Market. Sweetener manufacturers are the principal purchasers of the Company s products in the food industry. The Company s specialty acid-washed activated carbon products are used in the purification of dextrose and high fructose corn syrup. Activated carbons are also sold for use in the purification of cane sugar. Other food processing applications include de-colorization and purification of many different foods and beverages and for purifying water, liquids and gases prior to usage in brewing and bottling. Continuous ion-exchange systems are also used in this market for the production of lysine and vitamin E as well as purification of dextrose, high fructose corn syrup and sugar cane.

Specialty Market. The Company is a major supplier of specialty activated carbons to manufacturers of gas masks for the United States and European military as well as protective respirators and collective filters for first responders and private industry. The markets for collective filters for U.S. and European military equipment, indoor air quality, and air containment in incineration and nuclear applications are also serviced.

Additional industries using activated carbons include precious metals producers to recover gold and silver from low-grade ore. The Company s activated carbon cloth product is used in medical and other specialty applications.

Sales and Marketing

In the United States, the Company operates primarily through a direct sales force. In some markets and technologies, the Company also sells through agents and distributors. In Canada and in Latin America, the Company maintains employee sales representation in Toronto, Ontario, Canada; Sao Paulo, Brazil; and Mexico City, Mexico, and also sells through agent/distributor relationships.

In the Asia Pacific Region, the Company maintains employee sales representation in Beijing, China; Guangzhou, Guangdong Province, China; Suzhou, Jiangsu Province, China; Hong Kong; Osaka, Japan; Tokyo, Japan; Singapore; and Taipei, Taiwan, and uses direct sales as well as agents and distributors.

In Europe, the Company maintains employee sales representation in Feluy, Belgium; Kolding, Denmark; Paris, France; Beverungen, Germany; Ashton-in-Makerfield, United Kingdom; Houghton-le-Spring, United Kingdom; Gothenburg, Sweden; and Stockholm, Sweden, and operates through a direct sales force. The Company also has a network of agents and distributors that conduct sales in certain countries in Europe, the Middle East, and Africa.

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Many offices can play a role in sales of products or services from each of the Company s segments. Geographic sales information can be found in Note 18 to the consolidated financial statements in Item 8 of this Annual Report. Also refer to Risk Factors in Item 1A.

Over the past three years, no single customer accounted for more than 10% of the total sales of the Company in any year.

Backlog

The Company had a sales backlog of $15.4 million and $18.3 million as of January 31, 2016 and 2015, respectively, in the Equipment segment. The $2.9 million decrease was a result of several large contracts that were completed during 2015 more than offset new contracts. The Company expects to carry approximately $1.7 million of the 2016 backlog into 2017 and $0.5 million into 2018.

Competition

With respect to the production and sale of activated carbon related products, the Company has a major global presence, and has several competitors in the worldwide market. Norit, a subsidiary of Cabot Corporation, the MWV (MeadWestvaco) Specialty Chemicals Division of WestRock Company, a United States company and Evoqua Water Technologies (formerly Siemens Water Technologies), a United States company, are the primary competitors. Chinese producers of coal-based activated carbon and certain East Asian producers of coconut-based activated carbon participate in the market on a worldwide basis and sell principally through numerous resellers. Competition in activated carbons, carbon equipment and services is based on quality, performance, and price. Other sources of competition for the Company s activated carbon services and systems are alternative technologies for purification, filtration, and extraction processes that do not employ activated carbons.

A number of other smaller competitors engage in the production and sale of activated carbons in local markets, but do not compete with the Company on a global basis. These companies compete with the Company in the sale of specific types of activated carbons, but do not generally compete with a broad range of products in the worldwide activated carbon business. For example, ADA Carbon Solutions, owned by Energy Capital Partners, competes with the Company in the America s market for the removal of mercury from coal-fired power plant flue gas.

The Company competes with several small regional companies for the sale of its reactivation services and carbon equipment in the United States, Europe, Japan, and China.

The Company s UV technologies product line has primary competition from Trojan Technologies, Inc., a Canadian company owned by Danaher Corporation, a United States company, and Xylem Inc, headquartered in White Plains, N.Y., a United States company.

Hyde Marine s ballast water treatment competition utilizing UV and filtration includes Panasia of Busan, Korea, Alfa Laval of Sweden and Optimarin of Norway. As of December 31, 2015, there are 57 treatment systems that have been granted IMO Type Approval, with 49 systems having United States Coast Guard (USCG) Alternative Management System (AMS) designation.

Raw Materials

The principal raw material purchased by the Company for its Activated Carbon and Service segment is bituminous coal from mines primarily in the United States purchased under long-term and annual supply contracts, as well as spot purchases.

The Company purchases natural gas from various suppliers for use in its Activated Carbon and Service segment production facilities. In both the United States and Europe, substantially all natural gas is purchased pursuant to various annual and multi-year contracts with natural gas companies.

The Company buys various metals, acids and other additives that are used within the activated carbon production process to enhance the performance of certain products. These materials are bought under multi-year and annual contracts, as well as on a spot basis.

The purchase of key equipment components and fabrications are coordinated through agreements with various suppliers for Hyde Marine, UV, ISEP® and the carbon equipment markets.

The Company does not presently anticipate any significant problems in obtaining adequate supplies of its raw materials or equipment components.

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Research and Development

The Company s primary research and development (R&D) activities are conducted at a research center in Pittsburgh, Pennsylvania with additional facilities in the United Kingdom and Japan. The Pittsburgh facility is used for the evaluation of experimental activated carbon and equipment and application development. Experimental systems are also designed and evaluated at this location.

The principal goals of the R&D s research program are to improve the Company s position as a technological leader in solving customers problems with its products, services and equipment; develop new products and services; and provide technical support to customers and operations of the Company.

Research programs include new and improved methods for manufacturing and utilizing new and enhanced activated carbons such as the commercial sales of numerous products for mercury removal from flue gas, including a proprietary third generation sulfur tolerant carbon with commercial sales.

The UV Technologies (UVT) Division performs R&D to continuously advance the application of UV technologies to pathogens as well as new and emerging contaminants. Additionally, UVT R&D is devoted to continual product advancement for reduction of life cycle cost to the customer and to ensure compliance with U.S. and international regulations. This includes R&D work on Advanced Oxidation for treatment of taste and odor compounds (MIB and Geosmin), nitrosamines, pesticide/herbicides and pharmaceutical/personal care products.

For ballast water treatment, Hyde Marine has active R&D for continued ballast treatment efficacy testing in multiple marine environments and new product development to extend the range, usability and end application.

Research and development expenses were $6.4 million, $6.4 million, and $6.0 million for the years ended December 31, 2015, 2014, and 2013, respectively.

Patents and Trade Secrets

The Company possesses a substantial body of technical knowledge and trade secrets and owns 53 United States patent applications and/or patents as well as 187 patent applications and/or patents in other countries. The issued United States and foreign patents expire in various years from 2016 through 2033.

The technology embodied in these patents, trade secrets, and technical knowledge applies to all phases of the Company s business including production processes, product formulations, and application engineering. The Company considers this body of technology important to the conduct of its business.

Regulatory Matters

The Company is subject to various environmental health and safety laws and regulations of a nature considered normal to its business. It is the Company s policy to accrue for amounts related to these matters when it is probable that a liability has been incurred and the loss amount is reasonably estimable. Refer to Note 16 to the consolidated financial statements in Item 8 of this Annual Report, which is incorporated herein by reference, for further details.

Employee Relations

As of December 31, 2015, the Company employed 1,090 persons on a full-time basis, 784 of whom were salaried and non-union hourly production, office, supervisory and sales personnel. The United Steelworkers represent 245 hourly personnel in the United States. The current contracts with the United Steelworkers expire on July 31, 2018, at the Pittsburgh, Pennsylvania facility, February 17, 2019 at the Columbus, Ohio facility and June 9, 2017 at the Company s Catlettsburg, Kentucky facility. The 61 hourly personnel at the Company s Belgian facility are represented by two national labor organizations with contracts that expire on December 31, 2016. The Company also has hourly employees at non-union facilities in Arizona, California, Mississippi, New York, and Pennsylvania, as well as in the United Kingdom and China.

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Copies of Reports

The periodic and current reports of the Company filed with the SEC pursuant to Section 13(a) of the Securities Exchange Act of 1934 are available free of charge, as soon as reasonably practicable after the same are filed with or furnished to the SEC, at the Company s website at www.calgoncarbon.com. All other filings with the SEC are available on the SEC s website at www.sec.gov.

Copies of Corporate Governance Documents

The following Company corporate governance documents are available free of charge at the Company s website at www.calgoncarbon.com and such information is available in print to any stockholder who requests it by contacting the Secretary of the Company at 3000 GSK Drive, Moon Township, PA 15108.

- Corporate Governance Guidelines
- Audit Committee Charter
- Compensation Committee Charter
- Governance Committee Charter
- Investment Committee Charter
- Code of Business Conduct and Ethics
- Code of Ethical Business Conduct Supplement for Chief Executive and Senior Financial Officers
- Related Party Transaction Policy

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Item 1A. Risk Factors:

Risks relating to our business

Delays in enactment of new state or federal regulations could restrict our ability to reach our strategic growth targets and lower our return on invested capital.

Our strategic growth initiatives are reliant upon more restrictive environmental regulations being enacted for the purpose of making water and air cleaner and safer. Examples include regulation of mercury emissions, drinking water disinfection by-products, and ship ballast water. If stricter regulations are delayed or are not enacted or enacted but subsequently repealed or amended to be less strict, or enacted with prolonged phase-in periods, our sales growth targets could be adversely affected and our return on invested capital could be reduced.

For example, on December 16, 2011, the U.S. Environmental Protection Agency (EPA) published the Mercury and Air Toxics Standards (MATS) rule. Power plants were required to begin complying with MATS on April 16, 2015, unless they were granted a one-year extension to begin to comply. Many power plants subject to MATS began to comply in April, while challenges to MATS validity were ruled upon at various levels of the U. S. court system. In June, as part of its ruling that the EPA did not appropriately consider the cost of MATS as it began to promulgate the rule, the U.S. Supreme Court remanded the MATS case back to the U.S Court of Appeals for the District of Columbia Circuit (D.C. Circuit) to determine its fate. In December, the D.C. Circuit ruled to keep MATS in effect while remanding the MATS case to the EPA for further proceedings. The EPA is expected to issue a final finding with respect to the cost of the regulation in early 2016. In late February, 2016, 20 states petitioned the U.S. Supreme Court to enjoin the MATS rule pending a petition for a writ of certiorari. While the Company expects that the issuance by the EPA of its final finding will keep MATS in effect going forward, the Company is unable to predict with certainty when and how the outcome of these complex legal, regulatory and legislative proceedings will affect demand for its products.

Also, the Hyde GUARDIAN® ballast water treatment system developed and sold by our Hyde Marine, Inc. subsidiary received type approval from the IMO in April 2009. However, the IMO Ballast Water Management Convention, which would mandate the use of IMO approved ballast water treatment systems for ships in international traffic, has yet to be ratified. Similarly, the USCG has published regulations for the regulation of ballast water in U.S waters. The Company and other ballast water treatment system manufacturers have received Alternate Management System designation from the USCG but this is a temporary designation. The USCG has not yet approved any ballast water treatment system, including the Hyde GUARDIAN® ballast water treatment system, for use under its new regulations. Furthermore, in December 2015, the USCG decided it would not allow the Company, and several other manufacturers of ultraviolet light-based ballast water treatment systems, to use the Most Probable Number (MPN) test method for purposes of testing the Company s system to apply for type approval under USCG regulations. Although the Company has appealed the USCG s decision, its ramifications, if upheld, could have an adverse effect on the Company s ability to compete in the market for ballast water treatment systems for vessels discharging ballast water in

U.S. waterways and ports, or cause the Company to invest time and incur additional expenses to redesign its system.

Increases in U.S. and European imports of Chinese or other foreign manufactured activated carbon could have an adverse effect on our financial results.

We face pressure and competition in our U.S. and European markets from brokers of low cost imported activated carbon products, primarily from China. We believe we offer the market technically superior products and related customer support. However, in some applications, low cost imports have become accepted as viable alternatives to our products because they have been frequently sold at less than fair value in the market. If the markets in which we compete experience an increase in these imported low cost carbons, especially if sold at less than fair value, we could see declines in net sales. In addition, the sales of these low cost activated carbons may make it more difficult for us to pass through raw material price increases to our customers.

In response to a petition from the U.S. activated carbon industry filed in March 2006, the United States Department of Commerce (DOC) announced the imposition of anti-dumping duties starting in October 2006. The DOC announcement was based on extensive economic analysis of the operations and pricing practices of the Chinese producers and exporters. The DOC announcement required U.S. Customs and Border Protection to require importers of steam activated carbon from China to post a provisional bond or cash deposit in the amount of the duties. The anti-dumping duties are intended to offset the amount by which the steam activated carbon from China is sold at less than fair value in the U.S.

Annual reviews of duties begin to occur in April of the year following the twelve month period then completed. The significant anti-dumping duties originally imposed by the DOC, and the affirmative decision by the International Trade Commission (ITC), has had an adverse impact on the cost of Chinese manufactured activated carbon imported into the U.S. However, the anti-dumping duties could be further reduced or eliminated in the future which could adversely affect demand or pricing of our product.

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We have operations in multiple foreign countries and, as a result, are subject to foreign exchange translation risk, which could have an adverse effect on our financial results.

We conduct significant business operations in several foreign countries. Of our 2015 net sales, approximately 46% were sales to customers outside of the United States, and 2015 net sales denominated in non-U.S. dollars represented approximately 31% of our overall net sales. We conduct business in the local currencies of each of our foreign subsidiaries or affiliates. Those local currencies are then translated into U.S. dollars at the applicable exchange rates for inclusion in our consolidated financial statements. The exchange rates between some of these currencies and the U.S. dollar in recent years have fluctuated significantly and may continue to do so in the future. Changes in exchange rates, particularly the strengthening of the U.S. dollar, could significantly reduce our sales and profitability from foreign subsidiaries or affiliates from one period to the next as local currency amounts are translated into fewer U.S. dollars.

Our European and Japanese activated carbon businesses are sourced from both the United States and China, which subjects these businesses to foreign exchange transaction risk.

Our virgin activated carbon is produced primarily in the United States. We also source significant quantities of activated carbon in China. Produced and sourced activated carbons are provisioned to all of our global operations. Purchases of these carbons are typically denominated in U.S. dollars yet are ultimately sold in other currencies thereby creating foreign currency exchange transaction risk. We generally execute foreign currency derivative contracts of not more than eighteen months in duration to cover a portion of our known or projected foreign currency exposure. However, those contracts do not protect us from longer-term trends of a strengthening U.S. dollar, which could significantly increase our cost of activated carbon delivered to our European and Japanese markets, and we may not be able to offset these costs by increasing our prices.

Our financial results could be adversely affected by an interruption of supply or an increase in coal prices.

We use bituminous coal as the main raw material in our activated carbon production process. Based upon our current projected usage and price, we estimate that our 2016 coal costs in the United States will be approximately $27.4 million excluding the cost of transportation to our carbon manufacturing facilities. We have various annual and multi-year contracts in place for the supply of our coal that expire at various intervals from 2016 to 2018 and cover approximately 84% of our expected 2016 tonnage. Interruptions in coal supply caused by mine accidents, labor disputes, transportation delays, breach of supplier contractual obligations, floods or other events for other than a temporary period could have an adverse effect on our ability to meet customer demand. We use very specific high quality metallurgical coals for many of our products. Our inability to obtain these high-quality coals at competitive prices in a timely manner due to changing market conditions with limited high-quality suppliers could also have an adverse affect on our financial results. In addition, increases in the prices we pay for coal under our supply contracts could adversely affect our financial results by significantly increasing production costs. Based upon the current estimated usage and price of coal in 2016, a hypothetical 10% increase in the price of coal, excluding transportation costs, that is not covered by our supply contracts, would result in $0.5 million of additional pre-tax expense to us. We may not be able to pass through raw material price increases to our customers.

A planned or unplanned shutdown at one of our production facilities could have an adverse effect on our financial results.

We operate multiple facilities and source product from strategic partners who operate facilities which are close to water or in areas susceptible to floods, hurricanes, and earthquakes. An unplanned shutdown at any of our or our strategic partners facilities for more than a temporary period as a result of a hurricane, typhoon, earthquake, flood or other natural disaster, or as a result of fire, explosions, war, terrorist activities, political conflict or other hostilities, or as a result of unforeseen mechanical problems, could significantly affect our ability to meet our demand requirements, thereby resulting in lost sales and profitability in the short-term or eventual loss of customers in the long-term. In addition, a prolonged planned shutdown of any of our production facilities due to a change in the business conditions could result in impairment charges that could have an adverse impact on our financial results.

Our required capital expenditures may exceed estimates.

Our capital expenditures were $62.3 million in 2015 and are forecasted to be approximately $50.0 million to $60.0 million in 2016. Future capital expenditures may be significantly higher and may vary substantially if we are required to undertake certain actions to comply with new regulatory requirements or compete with new technologies. We may not have the capital to undertake the capital investments. If we are unable to do so, we may not be able to effectively compete.

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Encroachment into our markets by competitive technologies could adversely affect our financial results.

Activated carbon is utilized in various applications as a cost-effective solution to solve customer problems. If other competitive technologies, such as membranes, ozone and UV, are advanced to the stage in which such technologies could cost effectively compete with activated carbon technologies, we could experience a decline in net sales, which could adversely affect our financial results.

Our industry is highly competitive. If we are unable to compete effectively with competitors having greater resources than we do, our financial results could be adversely affected.

Our activated carbon and service business faces significant competition principally from Cabot Norit, the MWV (MeadWestvaco) Specialty Chemicals Division of WestRock Company and Evoqua Water Technologies, as well as from Chinese and European activated carbon producers and East Asian producers of coconut-based activated carbon. Our UV technology products face significant competition principally from Trojan Technologies, Inc., which is owned by Danaher Corporation, and Xylem. Our competitors include major manufacturers and diversified companies, a number of which have revenues and capital resources exceeding ours, which they may use to develop more advanced or more cost-effective technologies, increase market share or leverage their distribution networks. We could experience reduced net sales as a result of having fewer resources than these competitors.

Our international operations are subject to political and economic risks for conducting business in corrupt environments.

We conduct business in developing countries, and we are focusing on increasing our sales in regions such as South America, Southeast Asia, India, China and the Middle East, which are less developed, have less stability in legal systems and financial markets, and are generally recognized as potentially more corrupt business environments than the United States and therefore, present greater political, economic and operational risks. We emphasize compliance with the law and have policies in place, procedures and certain ongoing training of employees with regard to business ethics and key legal requirements such as the U.S. Foreign Corrupt Practices Act (FCPA), the U.K. Bribery Act (UKBA) and all applicable export control laws and regulations of the United States and other countries (the Export Regulations); however, there can be no assurances that our employees will adhere to our code of business conduct, other Company policies, the FCPA, the UKBA or the Export Regulations. If we fail to enforce our policies and procedures properly or maintain internal accounting practices to accurately record our international transactions or if we violate any of these laws or regulations, we may be subject to severe criminal or civil sanctions and penalties, including fines, debarment from export privileges and loss of authorizations needed to conduct aspects of our international business. We could incur significant costs for investigation, litigation, fees, settlements and judgments which, in turn, could negatively affect our business, financial condition and results of operations.

Significant stockholders or potential stockholders may attempt to effect changes at the Company or acquire control over the Company, which could adversely affect the Company s results of operations and financial condition.

Stockholders of the Company may from time to time engage in proxy solicitations, advance stockholder proposals or otherwise attempt to effect changes or acquire control over the Company. Campaigns by stockholders to effect changes at publicly traded companies are sometimes led by investors seeking to increase short-term stockholder value through actions such as financial restructuring, increased debt, special dividends, stock repurchases or sales of assets or the entire company. Responding to proxy contests and other actions by activist stockholders can be costly and time-consuming, disrupting the Company s operations and diverting the attention of the Company s Board of Directors and senior management from the pursuit of business strategies. As a result, stockholder campaigns could adversely affect the Company s results of operations and financial condition.

Failure to innovate new products or applications could adversely affect our ability to meet our strategic growth targets.

Part of our strategic growth and profitability plans involve the development of new products or new applications for our current products in order to replace more mature products or markets that have seen increased competition. If we are unable to develop new products or applications, our financial results could be adversely affected.

Our inability to successfully negotiate new collective bargaining agreements upon expiration of the existing agreements could have an adverse effect on our financial results.

We have collective bargaining agreements in place at four production facilities covering approximately 28% of our full-time workforce as of December 31, 2015. Those collective bargaining agreements expire through 2019. Any work stoppages as a result of disagreements with any of the labor unions or our failure to renegotiate any of the contracts as they expire could disrupt production and significantly increase product costs as a result of less efficient operations caused by the resulting need to rely on temporary labor.

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Our business is subject to a number of global economic risks.

Financial markets in the United States, Europe, and Asia continue to experience disruption, including, among other things, volatility in security prices, diminished liquidity and credit availability, rating downgrades of certain investments and declining valuations of others. Governments have taken actions intending to address these market conditions that include restricted credit and declines in values of certain assets.

An economic downturn in the businesses or geographic areas in which we sell our products could reduce demand for our products and result in a decrease in sales volume that could have a negative impact on our results of operations. Continued volatility and disruption of financial markets in the United States, Europe and Asia could limit our customers ability to obtain adequate financing or credit to purchase our products or to maintain operations, and result in a decrease in sales volumes that could have a negative impact on our results of operations.

Our international operations expose us to political and economic uncertainties and risks from abroad, which could negatively affect our results of operations.

We have manufacturing facilities and sales offices in Europe, China, Hong Kong, Japan, Taiwan, Singapore, Brazil, Mexico, Canada, and the United Kingdom which are subject to economic conditions and political factors within the respective countries which, if changed in a manner adverse to us, could negatively affect our results of operations and cash flow. Political risk factors include, but are not limited to, taxation, nationalization, inflation, currency fluctuations, foreign exchange restrictions, increased regulation and quotas, tariffs and other protectionist measures. Approximately 79% of our sales in 2015 were generated by products sold in the U.S., Canada, and Western Europe while the remaining sales were generated in other areas of the world, such as Asia, Eastern Europe, and Latin America.

Environmental compliance and remediation and potential climate change could result in substantially increased capital requirements and operating costs.

Our production facilities are subject to environmental laws and regulations in the jurisdictions in which they operate or maintain properties. Costs may be incurred in complying with such laws and regulations. Each of our domestic production facilities require permits and licenses issued by local, state and federal regulators which regulate air emissions, water discharges, and solid waste handling. These permits are subject to renewal and, in some circumstances, revocation. International environmental requirements vary and could have substantially lesser requirements that may give competitors a competitive advantage. Additional costs may be incurred if environmental remediation measures are required. In addition, the discovery of contamination at any of our current or former sites or at locations at which we dispose of waste may expose us to cleanup obligations and other damages. In addition, there is currently vigorous debate over the effect of CO^2 gas releases and the effect on climate change. Many of our activities create CO^2 gases. Should legislation or regulation be enacted, it could have a material adverse effect upon our ability to expand our operations or perhaps continue to operate as we currently do.

Our financial results could be adversely affected by shortages in energy supply or increases in energy costs outside the United States.

The price for and availability of energy resources could be volatile as it is affected by political and economic conditions that are outside our control. We utilize natural gas as a key component in our activated carbon reactivation manufacturing process at each of our major facilities outside the United States. If shortages of, or restrictions on the delivery of natural gas occur, production at our non-domestic activated carbon reactivation facilities would be reduced, which could result in missed deliveries or lost sales. We also have exposure to fluctuations in energy costs as they relate to the transportation and distribution of our products. We may not be able to pass through natural gas and other fuel price increases to our customers.

Our business includes capital equipment sales which could have fluctuations due to the cyclical nature of that type of business.

Our Equipment segment represented approximately 7% of our 2015 net sales. This business generally has a long project life cycle from bid solicitation to project completion and often requires customers to make large capital commitments well in advance of project execution. In addition, this business is usually affected by the general health of the overall economy. As a result, sales and earnings from the Equipment segment could be volatile.

Our products could infringe the intellectual property rights of others, which may cause us to pay unexpected litigation costs or damages or prevent us from selling our products.

Although it is our intention to avoid infringing or otherwise violating the intellectual property rights of others, our products may infringe or otherwise violate the intellectual property rights of others. We may be subject to legal proceedings and claims, including

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claims of alleged infringement by us of the patents and other intellectual property rights of third parties. Intellectual property litigation is expensive and time-consuming, regardless of the merits of any claim.

If we were to discover or be notified that our products potentially infringe or otherwise violate the intellectual property rights of others, we may need to obtain licenses from these parties or substantially re-engineer our products in order to avoid infringement. We might not be able to obtain the necessary licenses on acceptable terms, or at all, or be able to re-engineer our products successfully. Moreover, if we are sued for infringement and lose the suit, we could be required to pay substantial damages and/or be enjoined from using or selling the infringing products. Any of the foregoing could cause us to incur significant costs and prevent us from selling our products.

Declines in the operating performance of one of our business segments could result in an impairment of the segment s goodwill.

As of December 31, 2015, we had consolidated goodwill of approximately $25.8 million recorded in our business segments, primarily from our Activated Carbon and Service and Equipment segments. We test our goodwill on an annual basis or when an indication of possible impairment exists in order to determine whether the carrying value of our assets is still supported by the fair value of the underlying business. To the extent that it is not, we are required to record an impairment charge to reduce the asset to fair value. A decline in the operating performance of any of our business segments could result in a goodwill impairment charge which could have a material effect on our financial results.

Our pension plans are currently underfunded, and we could be subject to increases in pension contributions to our defined benefit pension plans, thereby restricting our cash flow.

We sponsor various pension plans in the United States and Europe that are underfunded and require significant cash payments. We contributed $1.3 million and $1.5 million to our U.S. pension plans and $1.8 million and $2.0 million to our European pension plans in 2015 and 2014, respectively. We currently expect to contribute approximately $1.9 million to our European pension plans to meet minimum funding requirements, in accordance with our funding policy, while no funding is required for our U.S. pension plans in 2016. An economic downturn would negatively impact the fair value of our pension assets which could result in increased funding requirements of our pension plans. If our cash flow from operations is insufficient to fund our worldwide pension liability, we may be forced to reduce or delay capital expenditures or seek additional capital.

The funding status of our pension plans is determined using many assumptions, such as inflation, rates of return on investments, mortality, turnover and interest rates, any of which could prove to be different than projected. If the performance of the assets in our pension plans does not meet our expectations, or if other actuarial assumptions are modified, or not realized, we may be required to contribute more to our pension plans than we currently expect. For example, an approximate 25-basis point decline in the funding target interest rate under Section 430 of the Internal Revenue Code, as added by the Pension Protection Act of 2006 for minimum funding requirements, would increase our minimum required funding policy contributions to our U.S. pension plans by approximately $1.0 million to $2.0 million over the next three fiscal years. This amount reflects the provisions of Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Highway and Transportation Funding Act of 2014 (HAFTA), both of which affect pension plan funding.

Our pension plans in the aggregate are underfunded by approximately $29 million as of December 31, 2015 (based on the actuarial assumptions used for Accounting Standards Codification (ASC) 715 Compensation Retirement Benefits purposes and comparing our projected benefit obligation to the fair value of plan assets) and required a certain level of mandatory contributions as prescribed by law. Our U.S. pension plans, which were underfunded by approximately $20 million as of December 31, 2015, are subject to ERISA. In the event our U.S. pension plans are terminated for any reason while the plans are less than fully funded, we will incur a liability to the Pension Benefit Guaranty Corporation that may be equal to the entire amount of the underfunding at the time of the termination. In addition, changes in required pension funding rules that were affected by the enactment of the Pension Protection Act of 2006 have significantly increased our funding requirements, which could have an adverse effect on our cash flow and require us to reduce or delay our capital expenditures or seek additional capital. Refer to Note 9 to the consolidated financial statements in Item 8 of this Annual Report.

Our certificate of incorporation and bylaws and Delaware law contain provisions that may delay or prevent an otherwise beneficial takeover attempt of our Company.

Certain provisions of our certificate of incorporation and bylaws and Delaware law could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders. These include provisions:

- providing for a board of directors with staggered, three-year terms;

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- requiring super-majority voting to affect certain amendments to our certificate of incorporation and bylaws;
- limiting the persons who may call special stockholders meetings;
- limiting stockholder action by written consent;
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholders meetings; and
- allowing our board of directors to issue shares of preferred stock without stockholder approval.

These provisions, alone or in combination with each other, may discourage transactions involving actual or potential changes of control, including transactions that otherwise could involve payment of a premium over prevailing market prices to holders of our common stock, or could limit the ability of our stockholders to approve transactions that they may deem to be in their best interest.

The security of our information technology systems could be compromised, which could adversely affect our ability to operate.

Increased global information technology security requirements, threats and sophisticated and targeted computer crime pose a risk to the security of our systems, networks and the confidentiality, availability and integrity of our data. Despite our efforts to protect sensitive information and confidential and personal data, our facilities and systems may be vulnerable to security breaches. This could lead to negative publicity, theft, modification or destruction of proprietary information or key information, manufacture of defective products, production downtimes and operational disruptions, which could adversely affect our reputation, competitiveness and results of operations.

Item 1B. Unresolved Staff Comments:

None

Item 2. Properties:

The Company owns twelve production facilities, two of which are located in Pittsburgh, Pennsylvania; and one each in the following locations: Catlettsburg, Kentucky; Pearlington, Mississippi; Blue Lake, California; Columbus, Ohio; Gila Bend, Arizona; Feluy, Belgium; Grays, United Kingdom; Suzhou, China; Tipton, United Kingdom; and Fukui, Fukui Prefecture, Japan. The Company leases two production facilities in Findlay Township, Pennsylvania and one production facility in each of the following locations: Houghton le-Spring, United Kingdom; Ashton-in-Makerfield, United Kingdom and North Tonawanda, New York. The Company owns two warehouses, one of which is in Pittsburgh, Pennsylvania and the other is in Feluy, Belgium. The Company also leases 69 warehouses, service centers, sales office facilities and storage yards. Of these, twenty-five are located in the United States, twenty-six are in Japan, two in each of Singapore, Denmark and Brazil and one in Canada, the United Kingdom, Germany, Taiwan, France, Hong Kong, China, Mexico, Sweden and Thailand. Two of the United States facilities are located in the Pittsburgh, Pennsylvania area and one each in the following locations: Downingtown, Pennsylvania; Rutland, Massachusetts; Joliet, Illinois; Santa Fe Springs, California; Stockton, California; Tempe, Arizona; Kenova, West Virginia; South Point, Ohio; Troutdale, Oregon; Sulphur, Louisiana; Wilmington, Delaware; Phoenix, Arizona; Westlake, Louisiana and Douglasville, Georgia as well as four in North Tonawanda, New York; three in Houston, Texas and two in Huntington, West Virginia. In Japan, the Company leases twenty-six facilities, five in Chiba, three in Hyogo, two in each of Tokyo, Osaka, Okayama, Hokkaido and Fukuoka and one each in Shizuoka, Saitama, Fukui, Miyagi, Hiroshima, Ibaraki, Tochigi and Gifu. The facilities in Denmark are located in Kolding and Alvertslund. The Brazilian facilities are both located in Sao Paulo. The Swedish facility is located in Gothenburg. The Canadian facility is located in St. Catherines, Ontario. The United Kingdom facility is located in Ashton-in-Makerfield. The facility in Germany is located in Beverungen. The Taiwan facility is located in Taipei. The facility in France is located in Paris. The facility in Mexico is in Baja, Mexico. The China facility is located in Tianjin. The Hong Kong facility is located in Central. The Company s 20% owned joint venture, Calgon Carbon (Thailand) Co. Ltd., leases one facility in Nakornrachasima, Thailand.

The Catlettsburg, Kentucky plant is the Company s largest facility, with plant operations occupying approximately 50 acres of a 226-acre site. This plant, which serves the Activated Carbon and Service segment, produces granular and powdered activated carbons and acid washed granular activated carbons and reactivates spent granular activated carbons.

The Pittsburgh, Pennsylvania carbon production plant occupies a 4-acre site and a recently acquired 11 acre site which serve the Activated Carbon and Service segment. Operations at the plant include the reactivation of spent granular activated carbons, the impregnation of granular activated carbons and the grinding of granular activated carbons into powdered activated carbons. The plant also has the capacity to finish coal-based or coconut-based specialty activated carbons. The plant is now partially idle during a construction phase and a 36,000 square foot warehouse is being constructed on the new acreage which is expected to be completed in the third quarter of 2017.

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The Pearlington, Mississippi plant occupies a site of approximately 100 acres. The plant has one production line that produces granular and powdered activated carbons for the Activated Carbon and Service segment.

The Columbus, Ohio plant occupies approximately 27 acres. Operations at the plant include the reactivation of spent granular activated carbons, impregnation of activated carbon, crushing activated carbon to fine mesh, acid and water washing, filter-filling, and various other value added processes to granular activated carbon for the Activated Carbon and Service segment.

The Pittsburgh, Pennsylvania Equipment and Assembly plant is located on Neville Island and is situated within a 16-acre site that includes a 300,000 square foot building. The Equipment and Assembly plant occupies 85,000 square feet with the remaining space used as a centralized warehouse for carbon inventory. The plant, which serves both the Equipment and Activated Carbon and Service segments, manufactures and assembles fully engineered carbon and ISEP® equipment for purification, concentration and separation systems. This plant also serves as the East Coast staging and refurbishment point for carbon service equipment.

The Findlay Township, Pennsylvania Equipment plants consist of a 44,000 square foot production facility and a 16,691 square foot production facility located near Pittsburgh, Pennsylvania. The facilities are adjacent properties and the primary focus is the manufacture of UV and Hyde GUARDIAN® equipment, including mechanical and electrical assembly, controls systems integration and validation testing of equipment. This location also serves as the Pilot Testing facility for Process Development, as well as the spare parts distribution center for UV and Hyde GUARDIAN® systems. These plants serve the Equipment segment.

The Gila Bend, Arizona facility occupies a 20 acre site. Operations at the plant include the reactivation of spent granular activated carbons for the Activated Carbon and Service segment.

The North Tonawanda, New York plant consists of 12,500 square feet. The facility houses a dry feed system, screening tower, reactivation furnace, storage tanks, and packaging system and services customers for the Activated Carbon and Service segment.

The Blue Lake plant, located near the city of Eureka, California, occupies approximately two acres. The primary operation at the plant includes the reactivation of spent granular activated carbons for the Activated Carbon and Service segment. The plant is currently idled.

The Feluy plant occupies a site of approximately 38 acres located 30 miles south of Brussels, Belgium. Operations at the plant include both the reactivation of spent granular activated carbons and the grinding of granular activated carbons into powdered activated carbons for the Activated Carbon and Service segment.

The Grays plant occupies a three-acre site near London, United Kingdom. Operations at the plant include the reactivation of spent granular activated carbons for the Activated Carbon and Service segment.

The Ashton-in-Makerfield plant occupies a 1.6 acre site, 20 miles west of Manchester, United Kingdom. Operations at the plant include the impregnation of granular activated carbons for the Activated Carbon and Service segment. The plant also has the capacity to finish coal-based or coconut-based activated carbons.

The Houghton le-Spring plant, located near the city of Newcastle, United Kingdom, occupies approximately two acres. Operations at the plant include the manufacture of woven and knitted activated carbon textiles and their impregnation and lamination for the Consumer segment.

The Fukui, Fukui Prefecture, Japan plant, that serves the Activated Carbon and Service segment, occupies a site of approximately 6 acres and has two production lines for carbon reactivation.

The Suzhou, China plant occupies approximately 11 acres and is licensed to export activated carbon products. This plant is a reactivation facility that serves the Activated Carbon and Service segment.

In October of 2011, the Company purchased a plant in which it will reactivate spent granular activated carbon to serve the Activated Carbon and Service segment in Tipton, Dudley, United Kingdom. The Company is currently making plant renovations and upgrades for reactivating spent granular activated carbon. The plant is not currently operational, but should return to operation in the first quarter of 2016.

The Company believes that the plants and leased facilities are adequate and suitable for its current operating needs.

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Item 3. Legal Proceedings:

The Company is involved in various legal proceedings, lawsuits and claims, including employment, product warranty and environmental matters of a nature considered normal to its business. It is the Company s policy to accrue for amounts related to the legal matters when it is probable that a liability has been incurred and the loss amount is reasonably estimable. Refer to Note 16 to the consolidated financial statements in Item 8 of this Annual Report, which is incorporated herein by reference.

Item 4. Mine Safety Disclosures:

Not applicable.

PART II

Item 5. Market for Registrant s Common Equity, Related Stockholder Matters, and Issuer Repurchases of Equity Securities:

Common Shares and Market Information

Common shares are traded on the New York Stock Exchange under the trading symbol CCC. There were 1,202 registered stockholders as of December 31, 2015.

Quarterly Common Stock Price Ranges and Dividends

	2015			2014		
Fiscal Quarter	**High**	**Low**	**Dividend**	**High**	**Low**	**Dividend**
First	**$ 21.59**	**$ 19.02**	**$ 0.05**	$ 22.00	$ 18.74	
Second	**$ 23.20**	**$ 19.26**	**$ 0.05**	$ 23.05	$ 19.38	
Third	**$ 19.69**	**$ 14.90**	**$ 0.05**	$ 23.13	$ 19.38	
Fourth	**$ 18.22**	**$ 14.72**	**$ 0.05**	$ 22.06	$ 18.56	

On February 18, 2015, the Company s Board of Directors reinstated its common stock dividend program. Quarterly dividends of $0.05 per share were declared in each of the four quarters for the year ended December 31, 2015. The Company did not declare or pay any dividends in 2014. Dividend declaration and payout are at the discretion of the Board of Directors. Future dividends will depend on the Company s earnings, cash flows, and capital investment plans to pursue long-term growth opportunities.

The information appearing in Item 12 of Part III below regarding common stock issuable under the Company s equity compensation plan is incorporated herein by reference.

Stockholder Return Performance Graph

The following performance graph and related information shall not be deemed filed with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that the Company specifically incorporates it by reference into such filing.

The graph below compares the yearly change in cumulative total stockholder return of the Company s common stock with the cumulative total return of the Standard & Poor s (S&P) 500 Stock Composite Index, the New Peer Group, and the Old Peer Group. The Company believes that its core business consists of purifying air, water and other products. As such, the Company s selected peer group consists of companies that are involved in lines of business that are similar to the Company s core business.

The New Peer Group is comprised of five companies: Cabot Corporation, CLARCOR, Inc., Donaldson Company, Inc., ESCO Technologies Inc., and Lydall, Inc. The Old Peer Group is also comprised of five companies, four of which were retained in the New Peer Group. However, because the fifth company, Pall Corporation, was acquired in August 2015, it was replaced in the New Peer Group by Cabot Corporation.

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Comparison of Five-Year Cumulative Total Return*

Among Calgon Carbon s Common Stock, S&P 500 Composite Index, and Peer Group

Issuer Repurchases of Equity Securities

Period	(a) Total Number of Shares Purchased (1)	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Repurchase Plans or Programs (2)	(d) Maximum Number (or Approximate Dollar Value) of Shares that May Yet be Purchased Under the Plans or Programs
October 1 October 31, 2015	307,600	$ 16.60	307,600	$ 79,373,431

November 1	November 30, 2015	194,100	$	15.98	194,100	$	76,271,435
December 1	December 31, 2015	237,252	$	16.62	236,953	$	72,332,172

(1) Includes 299 shares surrendered to the Company by employees to satisfy tax withholding obligations on restricted share awards issued under the Company s Equity Incentive Plan. Future purchases under this Plan will be dependent upon employee elections.

(2) In December 2013, the Company s Board of Directors authorized the repurchase of additional common stock, resulting in a total remaining availability of $150 million. There is no expiration date for this program.

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Item 6. Selected Financial Data:

FIVE-YEAR SUMMARY OF SELECTED FINANCIAL DATA

Calgon Carbon Corporation

(Dollars in thousands, except per share data)	**2015**	**2014**	**2013**	**2012 (4)**	**2011 (6)**
Income Statement Data:					
Net sales	**$ 535,004**	$ 555,103	$ 547,939	$ 562,255	$ 541,472
Net income	**$ 43,463**	$ 49,370	$ 45,713	$ 23,272	$ 39,224
Net income per common share, basic	**$ 0.84**	$ 0.93	$ 0.85	$ 0.41	$ 0.70
Net income per common share, diluted	**$ 0.82**	$ 0.92	$ 0.84	$ 0.41	$ 0.69
Cash dividends declared per common share	**$ 0.20**	$	$	$	$
Balance Sheet Data (as of year end):					
Total assets	**$ 656,518**	$ 621,661	$ 590,078	$ 577,769	$ 552,990
Long-term debt	**$ 103,941**(1)	$ 70,448(2)	$ 32,114(3)	$ 44,408(5)	$ 1,103(7)

(1) Excludes $7.5 million of debt which is classified as current portion of long-term debt. Refer to Note 8 of the consolidated financial statements in Item 8 of this Annual Report for further information.

(2) Excludes $0.8 million of debt which is classified as current. Refer to Note 8 of the consolidated financial statements in Item 8 of this Annual Report for further information.

(3) Excludes $2.2 million of debt which is classified as current.

(4) Includes $10.2 million of restructuring charges and $1.7 million of multi-employer pension charges. Also includes a $1.7 million charge related to an agreement with the Company s former Chief Executive Officer.

(5) Excludes $19.6 million of debt which is classified as current.

(6) Includes $3.3 million of net earnings related to a reversal of net uncertain tax positions, and a $2.2 million, pre-tax, employee separation charge.

(7) Excludes $26.3 million of debt which is classified as current.

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

Overview

The Company reported net income of $43.5 million or $0.82 per diluted share for 2015, as compared to net income of $49.4 million or $0.92 per diluted share for 2014. Sales decreased $20.1 million or 3.6% in 2015 as compared to 2014. The total negative impact of foreign currency translation due to a stronger U.S. dollar on consolidated net sales was $22.8 million.

The Company s results were impacted by both a slowing global economy and the negative impact of a strong U.S. dollar. The Company utilized its balance sheet to increase value by continuing an open market share repurchase program and reinstating its common stock dividend program.

Results of Operations

2015 Versus 2014

Net sales for the Activated Carbon and Service segment decreased $11.7 million or 2.3% from 2014. Included in this change was the negative impact of foreign currency translation which totaled $21.9 million.

	Increase (Decrease) in Net Sales		
(Dollars in millions)	**As Reported**	**Foreign Currency Impact**	**Net of Foreign Currency Impact**
Environmental Air market	$ 27.0	$ 2.6	$ 29.6
Environmental Water market	(4.4)	4.3	(0.1)
Food market	(10.8)	4.0	(6.8)
Industrial market	(6.1)	3.8	(2.3)
Potable Water market	(14.9)	5.7	(9.2)
Specialty Carbon market	(4.4)	1.2	(3.2)
Other	1.9	0.3	2.2
Total Activated Carbon and Service	$ (11.7)	$ 21.9	$ 10.2

The decrease in net sales for the Activated Carbon and Service segment is principally due to the negative impact of foreign currency translation. Absent the negative impact of foreign currency, sales for the Activated Carbon and Service Segment increased in 2015 as compared to 2014. The increase was principally due to higher sales in the Americas Environmental Air market of approximately $29.5 million due to additional sales volume as a result of customers complying with mercury removal regulations promulgated by 19 states and certain Canadian provinces, as well as the Mercury and Air Toxics Standards (MATS). This increase was partially offset by the decline in the Americas Food market due to certain non-repeat orders and Americas Specialty market due to continued lower demand for respirators from the U.S. government. In addition, the Asian Potable Water market declined approximately $8.2 million primarily due to certain large orders in 2014 that did not repeat in 2015, along with a softer growth rate.

Net sales for the Equipment segment decreased $6.0 million or 13.3% from 2014.

(Dollars in millions)		**Increase (Decrease) in Net Sales**
Carbon adsorption equipment	$	(3.6)
Ballast water treatment systems		(3.4)
Traditional ultraviolet light systems		
Ion exchange systems		1.3
Other		(0.3)
Total Equipment	$	(6.0)

The decline in sales was due to lower demand for carbon adsorption equipment resulting from the completion of projects for installations for certain customers related to the initial Disinfectants and Disinfection Byproducts Rule and a decline in project related discretionary spending as well as lower sales for ballast water treatment systems due to continued regulatory delays and a decline in sales of our equipment to offshore service vessels, the demand from which has been impacted by ongoing low oil prices. This decline was partially offset by the higher sales for ion exchange systems. Foreign currency translation effect in the Equipment segment was $0.3 million.

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Net sales in the Consumer segment decreased $2.4 million or 20.8% from 2014 due to higher demand from a single customer in 2014 that did not repeat in 2015, as well as the negative impact of foreign currency translation which totaled $0.6 million for the Consumer segment.

Net sales less cost of products sold (excluding depreciation and amortization), as a percentage of net sales, was 35.8% for 2015 compared to 34.6% in 2014, a 1.2 percentage point or $6.4 million increase which was primarily in the Activated Carbon and Service segment. Approximately $3.0 million of this improvement resulted from higher margin products sold, including FLUEPAC® products for mercury removal, coupled with a decline in volume of lower margin products. The Company s cost improvement programs, including lower coal costs of approximately $2.2 million, primarily from two long-term coal contracts, contributed to margin improvement in all geographic regions. In addition, the Company benefited from refunds for import duties paid of approximately $1.3 million under the Trade Preferences Extension Act of 2015 pertaining to purchases of coconut carbons. In the Equipment segment, improved margins on projects in progress contributed approximately $0.5 million to the improvement as compared to the prior year. The Company s cost of products sold excludes depreciation and amortization; therefore it may not be comparable to that of other companies.

Depreciation and amortization increased by $5.0 million or 16.4% in 2015 as compared to 2014. The increases were primarily due to higher depreciation expense related to improvements to the Company s Catlettsburg, Kentucky virgin carbon manufacturing facility and the July 2015 completion of the SAP re-implementation project. Also contributing to the increase was accelerated depreciation expense of approximately $3.0 million in 2015 related to certain assets that have been or will be replaced as the result of new projects, including the Company s SAP re-implementation project.

Selling, general and administrative expenses increased by $4.0 million or 4.9% in 2015 as compared to 2014. The increase was due to costs related to an SAP re-implementation project which commenced in January 2014 aimed at improving functionality of the Company s enterprise resource planning (ERP) system of approximately $1.0 million. The Company re-implemented SAP as of July 1, 2015. In addition, outside consulting services increased by $4.4 million. The Company experienced higher employee related costs of $2.0 million, of which $0.7 million was a result of higher pension costs. Partially offsetting these increases, which were primarily in the Activated Carbon and Service segment, was the positive impact of foreign currency translation of $3.1 million due to the stronger U.S. dollar which was also primarily within the Activated Carbon and Service segment. Selling, general and administrative expenses declined in the Equipment segment by $0.4 million in 2015 as compared to 2014, as a result of successful cost improvements, including a reduction in headcount.

Research and development expenses were comparable in 2015 as compared to 2014.

The Company recorded $0.3 million of restructuring income in 2014 which represents reductions in the estimated accrual and a pre-tax gain for the sale of a warehouse in Belgium.

Interest income was comparable in 2015 versus 2014.

Interest expense increased $0.5 million in 2015 as compared to 2014 due to an increase in the outstanding borrowings under the Company s debt agreements.

The additional income in other expense net of $1.2 million for 2015 as compared to 2014 was largely related to foreign exchange.

The income tax provision for 2015 was $19.9 million as compared to $23.1 million in 2014. For 2015, tax expense decreased approximately $3.2 million compared to 2014 predominately due to a decrease in pre-tax earnings of $9.1 million. In the fourth quarter of 2015, the Company completed a U.S. research and development tax credit study for the prior years 2012 2014. The Company recognized a benefit of $1.1 million related to the research and development credit. Compared to 2014, the Company s state income taxes decreased by $0.5 million related to state apportionment changes. The 2014 tax expense includes a net $1.4 million benefit related to a completed Internal Revenue Service (IRS) examination and the effective settlement and release of uncertain tax positions.

The effective tax rate for 2015 was 31.4% compared to 31.9% for the similar 2014 period. The 2015 effective rate was lower than the U.S. statutory rate mainly due to the mix of income throughout foreign jurisdictions, the majority of which was related to the UK and Singapore, which reduced the rate 3.1%. The aforementioned research and development credit reduced the 2015 effective tax rate by 1.7%. The decrease of the 2015 rate was partially offset by state income taxes which increased the overall 2015 tax rate by 1.8%.

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2014 Versus 2013

The Company reported net income of $49.4 million or $0.92 per diluted share for 2014, as compared to net income of $45.7 million or $0.84 per diluted share for 2013. Sales increased $7.2 million or 1.3% in 2014 as compared to 2013. The total negative impact of foreign currency translation on consolidated net sales was $3.2 million.

Net sales for the Activated Carbon and Service segment increased $15.9 million or 3.3% from 2013. The increase was principally due to higher sales in the Industrial Process market of $10.3 million driven by volume increases of approximately 10% which were primarily in Asia for the reactivation of industrial spent carbons in China and growth in the biogas market in Europe. In addition, higher demand and pricing in the Food market of $7.0 million for sweetener customers, largely the result of three new large orders in the Americas and Europe, and higher sales in the Potable Water market of $5.8 million mainly from significant orders for municipal drinking water treatment in Europe also contributed to the increase. Partially offsetting these increases was lower demand in the Specialty Carbon market of $6.1 million primarily related to metal recovery products in the Americas of $2.5 million as sales in 2013 did not repeat in 2014, and lower demand of respirator carbon products of $1.6 million due to a temporary slowdown in U.S. Government purchases. Also contributing to the decline was the $3.6 million negative impact of foreign currency translation.

Net sales in the Equipment segment decreased $9.6 million or 17.5% from 2013. The decrease was due to lower sales of traditional ultraviolet light systems of $5.8 million, carbon adsorption equipment of $3.9 million and ion exchange systems of $0.8 million as a result of several large contracts that were completed during the prior year which more than offset new contracts. Offsetting these declines were higher sales of ballast water treatment systems of $0.9 million. Foreign currency translation effects in the Equipment segment were not significant.

Net sales in the Consumer segment increased $0.8 million or 7.9% from 2013. The increase was due to higher demand for activated carbon cloth as well as the positive impact of foreign currency translation which totaled $0.5 million for the Consumer segment.

Net sales less cost of products sold (excluding depreciation and amortization), as a percent of net sales, was 34.6% in 2014 compared to 33.0% in 2013, an increase of 1.6 percentage points. The increase was primarily in the Activated Carbon and Service segment and included the favorable impact of approximately $2.9 million in the Americas region from price increases that were instituted in March 2013 and lower coal costs of approximately $1.9 million primarily from two long-term coal contracts. The Company also benefited from a reduction in pension costs of approximately $1.3 million for its U.S. plans as a result of favorable investment performance and a higher discount rate. In addition, 2013 included adjustments that increased the estimated costs to complete for several projects in process in the Equipment segment that totaled approximately $0.5 million. Finally, the favorable impact from our cost improvement programs including increased carbon production volumes of 3.3% during 2014 contributed to margin improvement in all three regions. The Company s cost of products sold excludes depreciation and amortization; therefore it may not be comparable to that of other companies.

Depreciation and amortization increased by $1.5 million or 5.3% in 2014 as compared to 2013. The increase for the year to date period is due primarily to depreciation related to the Company s Gila Bend, Arizona facility that was placed into service in the second quarter of 2013 and for other improvements to the Company s manufacturing facilities.

Selling, general and administrative expenses increased by $3.9 million or 5.1% in 2014 as compared to 2013. The increase was principally due to costs related to an SAP re-implementation project which commenced in January 2014 aimed at improving functionality of the Company s ERP system of approximately $3.8 million. Also contributing to the year over year increase was a charge of $0.4 million in 2014 related to a multi-employer pension plan as compared to a benefit of $1.1 million in 2013. Partially offsetting the higher expense was lower pension costs as mentioned above of approximately $0.8 million, in spite of a $0.9 million pension settlement charge. On a segment basis, selling, general and administrative expenses for the Activated Carbon and Service segment increased approximately $5.9 million primarily as a result of the items discussed above. Selling, general and administrative expenses for the Equipment segment declined approximately $2.1 million largely due to employee related expenses, and the Consumer segment was comparable to 2013.

Research and development expenses increased $0.4 million or 6.1% in 2014 as compared to 2013. The increase was primarily due to higher advanced product testing costs related to mercury removal from flue gas and slightly higher employee related costs.

The Company recorded $0.3 million of restructuring income in 2014 which represents reductions in the estimated accrual and a pre-tax gain for the sale of a warehouse in Belgium. In 2013, the Company recorded $0.5 million of restructuring charges related to headcount reductions which were offset by a pre-tax gain of $0.6 million for the sale of its activated carbon manufacturing facility in Datong, China. These restructuring charges are within the Activated Carbon and Service segment.

Litigation and other contingencies of $0.3 million in 2013 relate primarily to environmental expenses at the Company s Catlettsburg, Kentucky production facility. Refer to additional discussion in Note 16 of the consolidated financial statements in Item 8 of this Annual Report.

Interest income was comparable in 2014 versus 2013. Interest expense decreased $0.2 million versus the comparable 2013 period primarily due to an increase in capitalized interest and lower interest rates under the Company s borrowing arrangements. The average debt outstanding was slightly higher during 2014 as compared to 2013.

Other expense net increased $0.5 million or 40.1% in 2014 as compared to 2013. The 2013 period included a $0.3 million decline in an earn-out liability related to a 2010 acquisition that did not repeat in 2014 and $0.3 million reduction in royalty income for a UV license agreement that ended in 2013. Partially offsetting these increases was income of $0.3 million related to a government incentive in China.

The income tax provision for 2014 was $23.1 million as compared to $21.5 million in 2013. For 2014, tax expense increased approximately $1.6 million over 2013 related predominately due to an increase in pre-tax earnings of $5.3 million. In addition, the 2014 income tax provision includes a net $1.4 million benefit related to a completed IRS examination and the effective settlement and release of uncertain tax positions. The 2013 income tax provision included a benefit of $1.5 million from the sale of the Company s activated carbon manufacturing facility in Datong, China which occurred in March 2013.

The effective tax rate for 2014 was 31.9% compared to 32.0% for the similar 2013 period. The 2014 effective rate was lower than the U.S. statutory rate mainly due to the mix of income throughout foreign jurisdictions which reduced the rate 2.9% and the settlement of uncertain tax position which reduced the rate 1.9%. The decrease was partially offset by state income taxes.

Working Capital and Liquidity

The Company has had sufficient financial resources to meet its operating requirements and to fund capital spending, dividend payments, share repurchases and pension plans.

Cash flows provided by operating activities were $69.9 million for the year ended December 31, 2015, as compared to $84.3 million for the year ended December 31, 2014. The $14.4 million decrease is primarily due to unfavorable working capital changes from higher inventories of outsourced carbon products sourced in anticipation of sales to occur in 2016.

On February 18, 2015, the Company s Board of Directors reinstated its common stock dividend program. Quarterly dividends of $0.05 per share were declared and paid in each of the four quarters for the year ended December 31, 2015. No common stock dividends were declared or paid in 2014 or 2013.

The Company maintains a U.S. Credit Agreement (Credit Agreement) which provides for a senior unsecured revolving credit facility (Revolver) in an amount up to $225 million which expires on November 6, 2020. Availability under the Revolver is conditioned upon various customary conditions. The Credit Agreement also provides for senior unsecured delayed draw term loans (Delayed Draw Term Loans) in an aggregate amount up to $75 million which expires on November 6, 2020. Beginning January 1, 2016, quarterly repayments are required equal to 2.5% of the outstanding balance of the Delayed Draw Term Loans, with the remaining balance due on the November 6, 2020 expiration date. Total outstanding borrowings under the Credit Agreement increased $41.0 million in 2015. Total availability under the Credit Agreement was $189.9 million as of December 31, 2015.

Certain of the Company s domestic subsidiaries unconditionally guarantee all indebtedness and obligations related to borrowings under the Credit Agreement. The Company s obligations under the Credit Agreement are unsecured. The Credit Agreement contains customary affirmative and negative covenants for credit facilities of this type. The Company must comply with certain financial covenants including minimum interest coverage ratio and maximum leverage ratio as defined within the Credit Agreement. The Company was in compliance with all such covenants as of December 31, 2015.

Calgon Carbon Japan (CCJ) maintains a Term Loan Agreement which provides for borrowings up to 1.0 billion Japanese Yen and matures on May 10, 2017. In addition, CCJ maintains a Working Capital Loan Agreement which provides for borrowings up to 1.5 billion Japanese Yen and matures on March 31, 2016. The Company is jointly and severally liable as the guarantor of CCJ s obligations and the Company permitted CCJ to grant a security interest and continuing lien in certain of its assets, including inventory and accounts receivable, to secure its obligations under both loan agreements.

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Refer to Note 8 to the consolidated financial statements in Item 8 of this Annual Report, which is incorporated herein by reference, for further details on the Company s borrowing arrangements.

Share Repurchases

In November 2012, the Company s Board of Directors authorized an accelerated share repurchase of Company common stock under a share repurchase program (Program). On November 20, 2012, the Company paid a purchase price of $50 million and initially received 3,276,002 shares upon inception of the Program, for an average purchase price of $15.26 per share. The actual number of shares repurchased was 340,334 shares less than the number of shares previously delivered, and as a result, the Company sold back that many shares to the counterparty in the form of a private placement of unregistered securities during 2013.

In December 2013, the Company s Board of Directors approved an increase in the overall value of shares authorized for repurchase under its Program to $150 million, excluding the November 2012 accelerated share repurchase. Subsequently, the Company initiated an open market share repurchase program whereby 146,800 shares were repurchased in 2013 at an average price per share of $20.37. During 2014, the Company repurchased an additional 1,930,841 shares at an average price of $20.57 per share. During 2015, the Company repurchased an additional 2,002,444 shares at an average price of $17.45 per share. All of the aforementioned repurchases were funded from operating cash flows, cash on hand, and borrowings and the shares are held as treasury stock. During the period January 1, 2016 through February 18, 2016, the Company repurchased an additional 518,576 shares at an average price of $15.68 per share. Subsequent to these repurchases, the Company s remaining authorization to repurchase its common stock is approximately $64.1 million.

Contractual Obligations

The Company is obligated to make future payments under various contracts such as debt agreements, lease agreements, and unconditional purchase obligations. The following table represents the significant contractual cash obligations and other commercial commitments of the Company as of December 31, 2015.

			Payments due by period		
(Dollars in thousands)	**Total**	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
Long-term debt, including current portion	$ 111,441	$ 7,500	$ 18,741	$ 85,200	$
Interest (1)	5,944	1,452	2,544	1,948	
Operating leases	44,199	7,093	11,098	5,441	20,567
Unconditional purchase obligations (2)	63,790	20,022	40,883	1,442	1,443
Total contractual cash obligations	$ 225,374	$ 36,067	$ 73,266	$ 94,031	$ 22,010

(1) As of December 31, 2015, the weighted average effective interest rate was approximately 1.35% on the Company s total borrowings of $111.4 million. The Company s debt carries variable interest rates. The interest amounts have been estimated based on the applicable interest rate per annum as of December 31, 2015, and the outstanding debt balances as of December 31, 2015, adjusted for the future required repayments shown above.

(2) Primarily for the purchase of raw materials.

The long-term tax payable of $0.9 million, pertaining to the tax liability related to the accounting for uncertainty in income taxes, has been excluded from the above table due to the fact that the Company is unable to determine the period in which the liability will be resolved.

The Company does not have any special-purpose entities.

The Company maintains qualified defined benefit pension plans (the Qualified Plans), which cover certain non-union and union employees in the United States and Europe. The fair value of the Company s Qualified Plan assets has decreased to $118.7 million as of December 31, 2015 from $129.4 million as of December 31, 2014. During 2015, the Company made lump sum payments of $3.8 million to certain eligible terminated vested participants. During 2014, the Company made lump sum payments totaling $4.4 million to certain eligible terminated vested participants who elected a lump sum payment of their respective pension benefits. The Pension Protection Act, passed into law in August 2006, prescribes a new methodology for determining the minimum amount that must be contributed to U.S. defined benefit pension plans which began in 2008. During the years ended December 31, 2015 and 2014, respectively, the Company funded its Qualified Plans with $3.1 million and $3.5 million in contributions. The Company expects that it will be required, in accordance with its funding policy, to fund the Qualified Plans with approximately $1.9 million in contributions for the year ending December 31, 2016. The Company may make additional contributions to its Qualified Plans in 2016 beyond the required funding. Additional voluntary contributions would be dependent upon, among other things, the Company s ongoing operating results and liquidity.

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On February 18, 2015, the Company s Board of Directors reinstated its common stock dividend program. Quarterly dividends of $0.05 per share were declared and paid in each of the four quarters for the year ended December 31, 2015. In addition, on February 17, 2016, a common stock dividend of $0.05 per share was declared. No common stock dividends were declared during the years ended December 31, 2014 and 2013. Dividend declaration and payout are at the discretion of the Board of Directors. Future dividends will depend on the Company s earnings, cash flows, capital investment plans to pursue long-term growth opportunities, and share repurchases, if any.

Off-Balance Sheet Arrangements

The Company s off-balance sheet arrangements include the operating leases and unconditional purchase obligations disclosed above as well as letters of credit and guarantees as discussed in Note 8 to the consolidated financial statements in Item 8 of this Annual Report.

Capital Expenditures and Investments

Capital expenditures were $62.3 million, $63.5 million, and $30.3 million, in 2015, 2014 and 2013, respectively. Expenditures for 2015 included $19.3 million for improvements to the Company s Catlettsburg, Kentucky manufacturing facility, $5.8 million of upgrades to the Tipton plant in the UK, expenditures of $11.3 million related to the Company s new headquarters facility, which includes the research and development innovation center; and $4.1 million for a SAP re-implementation project. Expenditures for 2014 included $48.9 million for improvements to manufacturing facilities including approximately $38.6 million for the Company s Catlettsburg, Kentucky and Pearlington, Mississippi facilities, along with expenditures for a SAP re-implementation project of approximately $6.2 million. Expenditures for 2013 included $26.0 million for improvements to manufacturing facilities including approximately $8.6 million related to the final construction of the Gila Bend, Arizona facility. Capital expenditures for 2016 are currently projected to be approximately $50.0 million to $60.0 million. The aforementioned expenditures are expected to be funded by operating cash flows, cash on hand, and borrowings.

Proceeds for sales of property, plant and equipment were not significant in 2015, 2014 or 2013.

Proceeds from the sale of business were $0.6 million in 2013 related to the sale of the Company s activated carbon manufacturing facility in Datong, China.

The Company received $1.8 million and $1.7 million in 2014 and 2013, respectively, of proceeds related to government grants in the U.S., Asia and Europe. (Refer to Note 19 to the consolidated financial statements in Item 8 of this Annual Report).

Cash and cash equivalents include $45.1 million and $41.7 million held by the Company s foreign subsidiaries as of December 31, 2015 and 2014, respectively. Generally, cash and cash equivalents held by foreign subsidiaries are not readily available for use in the United States without adverse tax consequences. The Company s principal sources of liquidity are its cash flows from its operating activities or borrowings directly from its lines of credit. The Company does not believe the level of its non-U.S. cash position will have an adverse effect on working capital needs, planned growth, repayment of maturing debt, or benefit plan funding.

The Company currently expects that cash from operating activities plus cash balances and available external financing will be sufficient to meet its cash requirements for the next twelve months. The cash needs of each of the Company s reporting segments are principally covered by the segment s operating cash flow on a standalone basis. Any additional needs will be funded by cash on hand or borrowings under the Company s Credit Agreement, Japanese Working Capital Loan, or other credit facilities. Specifically, the Equipment and Consumer segments historically have not required extensive capital expenditures; therefore, the Company believes that operating cash flows, cash on hand and borrowings will adequately support each of the segments cash needs.

Other

The Company is involved in various legal proceedings, lawsuits and claims, including employment, product warranty and environmental matters of a nature considered normal to its business. It is the Company s policy to accrue for amounts related to these legal matters when it is probable that a liability has been incurred and the loss amount is reasonably estimable. Refer to Note 16 to the consolidated financial statements in Item 8 of this Annual Report, which is incorporated herein by reference, for further details.

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Critical Accounting Policies

Management of the Company has evaluated the accounting policies used in the preparation of the financial statements and related footnotes and believes the policies to be reasonable and appropriate. The preparation of the financial statements in accordance with accounting principles generally accepted in the United States requires management to make judgments, estimates, and assumptions regarding uncertainties that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities, and the reported amounts of revenues and expenses. Management uses historical experience and all available information to make these judgments and estimates, and actual results will inevitably differ from those estimates and assumptions that are used to prepare the Company s financial statements at any given time. Despite these inherent limitations, management believes that Management s Discussion and Analysis (MD&A) and the financial statements and related footnotes provide a meaningful and fair perspective of the Company.

The following are the Company s critical accounting policies impacted by management s judgments, assumptions, and estimates. Management believes that the application of these policies on a consistent basis enables the Company to provide the users of the financial statements with useful and reliable information about the Company s operating results and financial condition.

Revenue Recognition

The Company recognizes revenue and related costs when goods are shipped or services are rendered to customers provided that ownership, persuasive evidence of an arrangement exists and risk of loss have passed to the customer, the price to the customer is fixed or determinable, and collection is reasonably assured. Revenue for major equipment projects is recognized under the percentage of completion method. The Company s major equipment projects generally have a long project life cycle from bid solicitation to project completion. The nature of the contracts are generally fixed price with milestone billings. The Company recognizes revenue for these projects based on the fixed sales prices multiplied by the percentage of completion. In applying the percentage of completion method, a project s percent complete as of any balance sheet date is computed as the ratio of total costs incurred to date divided by the total estimated costs at completion. As changes in the estimates of total costs at completion and/or estimated total losses on projects are identified, appropriate earnings adjustments are recorded during the period that the change is identified. The Company has a history of making reasonably dependable estimates of costs at completion on contracts that follow the percentage of completion method; however, due to uncertainties inherent in the estimation process, it is possible that actual project costs at completion could vary from their estimates. The principal components of costs include material, direct labor, subcontracts, and allocated indirect costs. Indirect costs primarily consist of administrative labor and associated operating expenses, which are allocated to the respective projects on actual hours charged to the project utilizing a standard hourly rate.

Goodwill and Other Intangible Assets

Goodwill represents the excess of the cost of an acquired business over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed in a business combination. Identifiable intangible assets acquired in business combinations are recorded based on their fair values at the date of acquisition. In accordance with guidance within ASC 350 Intangibles Goodwill and Other goodwill and identifiable intangible assets with indefinite lives are not subject to amortization but must be evaluated for impairment. None of the Company s identifiable intangible assets other than goodwill have indefinite lives.

The Company has elected to perform the annual impairment test of its goodwill, as required, on December 31 of each year by initially comparing the fair value of each of the Company s reporting units to their related carrying values. The Company will also perform an impairment test between annual tests whenever events or circumstances indicate that the carrying value of a reporting unit may exceed its fair value. If the fair value of the reporting unit is less than its carrying value, the Company performs an additional step to determine the implied fair value of the goodwill. The implied fair value of goodwill is determined by first allocating the fair value of the reporting unit to all of the assets and liabilities of the unit and then computing the excess of the unit s fair value over the amounts assigned to the assets and liabilities. If the carrying value of goodwill exceeds the implied fair value of goodwill, such excess represents the amount of goodwill impairment, and the Company recognizes such impairment accordingly. Fair values are estimated using discounted cash flow and other valuation methodologies, such as the guideline public company method, that are based on projections of the amounts and timing of future revenues and cash flows, assumed discount rates and other assumptions as deemed appropriate. The Company also considers such factors as historical performance, anticipated market conditions, operating expense trends and capital expenditure requirements. Each reporting unit periodically prepares discrete operating forecasts and uses these forecasts as the basis for assumptions used in the discounted cash flow analysis and guideline public company method. The Company has consistently used a discount rate commensurate with its cost of capital which ranges 10.0% to 14.5%, adjusted for inherent business risks within its respective reporting units and has consistently used a terminal growth factor of 3.0%. The Company also reconciles the estimated aggregate fair value of its reporting units as derived from the discounted cash flow analysis and guideline public company method to the Company s overall market capitalization. The Company has six reporting units for purposes of goodwill evaluation. These reporting units consist of (1) the Activated Carbon and Service segment which is segregated into two

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regional reporting units, the Americas/Asia and Europe, (2) the Equipment segment which is segregated by technology (a) carbon adsorption, (b) ultraviolet light, and (c) ion exchange, and (3) the Consumer segment which includes the charcoal cloth reporting unit. The Company continually monitors its reporting units for impairment indicators and updates assumptions used in the most recent calculation of the fair value of a reporting unit as appropriate. The fair value of the Company s reporting units substantially exceeds the carrying value of its goodwill as of December 31, 2015.

The Company s identifiable intangible assets other than goodwill have finite lives. Certain of these intangible assets, such as customer relationships, are amortized using an accelerated methodology while others, such as patents, are amortized on a straight-line basis over their estimated useful lives. In addition, intangible assets with finite lives are evaluated for impairment whenever events or circumstances indicate that their carrying amount may not be recoverable, as prescribed by guidance within ASC 360 Property, Plant, and Equipment.

Pensions

The Company maintains Qualified Plans which cover certain union and non-union employees in the United States and Europe. As of December 31, 2015, all of the Qualified Plans do not allow for new employees to join the plans. In addition, two of the U.S. plans and one of the European plans do not allow for existing participants to continue to earn benefits under the plans. During 2015, the Company incurred a settlement charge of $0.8 million related to lump sum payments and paid $3.8 million from plan assets from both a U.S. Plan and a European Plan. During 2014, the Company offered an opportunity to certain eligible terminated vested participants in two of the U.S. plans to elect a lump sum payment of their respective pension benefits which were paid in the fourth quarter of 2014. As a result, the Company incurred a settlement charge of $1.0 million in 2014 related to such elections and paid $4.4 million from plan assets.

Net periodic pension cost, which totaled $2.0 million in 2015 (including an $0.8 million settlement charge) and $1.2 million in 2014 (including a $1.0 million settlement charge and a $0.4 million charge related to a multi-employer pension plan), is calculated based upon a number of actuarial assumptions, including expected long-term rates of return on the Company s Qualified Plans assets, which range from 5.54% to 7.50%. For 2016, the expected rate of return on assets will range from 5.28% to 7.00%. In developing the expected long-term rate of return assumption, the Company evaluated input from its investment advisors, including their review of asset class return expectations as well as long-term inflation assumptions. The Company also considered historical returns on asset classes and the investment mix. The expected long-term return on the U.S. Qualified Plans assets is based on a targeted asset allocation assumption of approximately 40%-50% with equity securities, 45%-55% with fixed-income securities, and 5% with other investments. The European Qualified Plans assets are based on a targeted asset allocation assumption of approximately 35%-45% with equity securities, 45%-55% with fixed-income securities, and 10%-15% with other investments. The Company regularly reviews its asset allocation and periodically rebalances its investments to the targeted allocation when considered appropriate. The Company will continue to evaluate its actuarial assumptions, including its expected rate of return, at least annually, and will adjust as necessary.

The discount rate that the Company utilizes for its Qualified Plans to determine pension obligations is based on a review of long-term bonds that receive one of the two highest ratings given by a recognized rating agency. The discount rate determined on this basis has increased from a range of 3.00% to 4.01% as of December 31, 2014 to a range of 3.15% to 4.38% as of December 31, 2015. The decline in the discount rate from those determined as of December 31, 2013 resulted in an increase in the 2015 benefit cost of approximately $1.0 million when compared to 2014.

During 2014, the Society of Actuaries released a new mortality table RP-2014, and a new projection scale MP-2014. As a result of these new tables, the Company changed its mortality assumptions for its U.S. plans in 2014. The Company adopted the new RP-2014 mortality table and a modified version of the new MP-2014 projection scale for the U.S. Qualified Plans which resulted in an increase in the 2015 benefit cost of approximately $0.9 million when compared to 2014. There was no change to the mortality table in 2015.

The Company estimates that it will record net periodic pension cost for the Qualified Plans that will approximate $3.1 million in 2016. The increase from 2015 is largely due to the lower than expected asset performance. Future actual net periodic pension cost will depend on future investment performance, funding levels, changes in discount rates and various other factors related to the populations participating in its Qualified Plans.

A sensitivity analysis of the projected incremental effect of a hypothetical one percent change in the significant assumptions used in the pension calculations is provided in the following table:

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	Hypothetical Rate Increase (Decrease)			
	U.S. Plans		European Plans	
(Dollars in thousands)	(1%)	1%	(1%)	1%
Discount rate				
Pension liabilities as of December 31, 2015	$ 14,877	$ (13,070)	$ 7,811	$ (6,165)
Pension costs for the year ended December 31, 2015	$ 1,531	$ (1,178)	$ 301	$ (78)
Indexation(1)				
Pension liabilities as of December 31, 2015	$	$	$ (1,808)	$ 1,966
Pension costs for the year ended December 31, 2015	$	$	$ (156)	$ 180
Expected return on plan assets				
Pension costs for the year ended December 31, 2015	$ 951	$ (951)	$ 303	$ (305)
Compensation				
Pension liabilities as of December 31, 2015	$ (952)	$ 968	$ (873)	$ 1,277
Pension costs for the year ended December 31, 2015	$ (192)	$ 220	$ (115)	$ 169

(1) Pension indexation related to the Company s German Qualified Plan is regulated by German pension law. The law dictates that a pension that is already in payment must be adjusted for inflation every 3 years which is measured by the published German price index for the same time interval. Pension indexation related to the Company s UK Chemviron Plan is based on the Consumer Price Index (CPI) in the UK. For this plan, the index is capped at 5% per annum for pensions accrued prior to January 1, 2008 and is capped at 2.5% per annum for pensions accrued after December 31, 2007. For purposes of the Company s UK Sutcliffe Speakman plan, the indexation is fixed at 3% per annum for pensions accrued prior to April 6, 1997. For those pensions accrued from April 6, 1997 to July 31, 2005, the index is subject to a minimum of 3% per annum and a maximum of 5% per annum. For those pensions accrued after July 31, 2005, the index is capped at 2.5% per annum.

Income Taxes

During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. Significant judgment is required in determining the Company s annual effective tax rate and in evaluating tax positions. The Company utilizes guidance within ASC 740 Income Taxes regarding the accounting for uncertainty in income taxes. This guidance contains a two-step approach to recognizing and measuring uncertain tax positions taken or expected to be taken in a tax return. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon settlement.

Although the Company believes it has adequately reserved for its uncertain tax positions, no assurance can be given that the final tax outcome of these matters will not be different. The Company adjusts these reserves in light of changing facts and circumstances, such as the closing of a tax audit, the refinement of an estimate, or a lapse of a tax statute. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will impact the provision for income taxes in the period in which such determination is made. The provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate, as well as the related penalties and net interest.

The Company is subject to varying statutory tax rates in the countries where it conducts business. Fluctuations in the mix of the Company s income between countries will result in changes to the Company s overall effective tax rate.

The Company recognizes benefits associated with foreign and domestic net operating loss and credit carryforwards when the Company believes that it is more likely than not that its future taxable income in the relevant tax jurisdictions will be sufficient to enable the realization of the tax benefits. As of December 31, 2015, the Company had recorded total deferred tax assets of $40.1 million, of which $4.9 million represents tax benefits resulting from $0.2 million of unused foreign tax credits, $2.4 million of net operating losses, $1.5 million of state tax credits, and a capital loss carryover of $0.8 million. State operating loss carryforwards of $0.6 million, net, expire from 2018 to 2034 of which approximately 97% will not expire before 2019.

The Company periodically reviews the need for a valuation allowance against deferred tax assets and recognizes these deferred tax assets to the extent that realization is more likely than not. Based upon a review of earnings history and trends, forecasted earnings and the relevant expiration of carryforwards, the Company believes that the valuation allowances provided are appropriate. As of December 31, 2015, the Company has recorded a valuation allowance of approximately $2.7 million related to foreign net operating losses, domestic capital loss carryovers, U.S. passive foreign tax credits and a state tax credit.

Approximately 95% of the Company s deferred tax assets, or $37.9 million, represent temporary differences associated with pensions, accruals, and inventories. Approximately 88% of the Company s deferred tax liabilities of $56.1 million as of December 31, 2015 relate to temporary differences associated with property, plant and equipment. These temporary differences will reverse in the future due to the natural realization of temporary differences between annual book and tax reporting. The Company believes that the deferred tax liabilities generally will impact taxable income of the same character (ordinary income), timing, and jurisdiction as the deferred tax assets.

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Litigation

The Company is involved in various asserted and unasserted legal claims. An estimate is made to accrue for a loss contingency relating to any of these legal claims if it is probable that a liability was incurred at the date of the financial statements and the amount of loss can be reasonably estimated. Because of the subjective nature inherent in assessing the outcome of legal claims and because the potential that an adverse outcome in a legal claim could have a material impact on the Company s legal position or results of operations, such estimates are considered to be critical accounting estimates. Legal fees associated with defending these various lawsuits and claims are expensed when incurred. The Company will continue to evaluate all legal matters as additional information becomes available. Reference is made to Note 16 of the consolidated financial statements in Item 8 of this Annual Report for a discussion of litigation and contingencies.

Long-Lived Assets

The Company evaluates long-lived assets under the provisions of ASC 360 Property, Plant, and Equipment which addresses financial accounting and reporting for the impairment of long-lived assets, and for disposal of long-lived assets. For assets to be held and used, the Company groups a long-lived asset or assets with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. An impairment loss for an asset group reduces only the carrying amounts of a long-lived asset or assets of the group being evaluated. The loss is allocated to the long-lived assets of the group on a pro-rata basis using the relative carrying amounts of those assets, except that the loss allocated to an individual long-lived asset of the group does not reduce the carrying amount of that asset below its fair value whenever that fair value is determinable without undue cost and effort. Estimates of future cash flows used to test the recoverability of a long-lived asset group include only the future cash flows 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.

New Accounting Pronouncements

Refer to Note 1 to the consolidated financial statements in Item 8 of this Annual Report, which is incorporated herein by reference, for details on recently issued accounting guidance.

Outlook

Activated Carbon and Service

The Company s estimate of a 7% compound annual growth rate for the activated carbon market for the period 2015 through 2020 is predicated on significant demand for mercury removal carbons in North America primarily driven by the U.S. Environmental Protection Agency s (EPA) regulations surrounding Mercury and Air Toxics Standards (MATS) and growing demand in activated carbon usage in China. While there have been noted increases in the demand for activated carbon in China, the recent economic slowdown in China may lead to lower than previously forecasted demand for activated carbon. The Company s activated carbon and service sales volume for 2015 increased 3.1%

over the comparable period in 2014. In 2012, in order to meet the expected increase in activated carbon demand, the Company completed the debottlenecking of its Pearl River facility adding approximately 8 million pounds of granular activated carbon production per year. In addition, a similar project to expand one of the Company s three virgin production lines at its Big Sandy facility commenced in the third quarter of 2014. Other sources of incremental capacity include increased utilization of the Company s activated carbon reactivation capacity in all three of its regions (Americas, Europe and Asia); operational improvements at the Company s virgin carbon manufacturing facilities due to new capital investments; a third-party plant efficiency study completed in the first half of 2014; an ongoing product rationalization project that has provided a reduction in stock keeping units (SKU) of 45%; and, the sale of outsourced carbons. Finally, the Company continues to evaluate other longer-term opportunities for virgin activated carbon expansion including a significant expansion of one of the Company s existing facilities. Impediments to near-term growth could include an economic slowdown in any or all of the regions served, impacts from delays in environmental regulations or the impact of the strength of the U.S. dollar.

The Company believes that fair pricing for activated carbon in the United States of America is being achieved via the application of a tariff imposed on Chinese steam activated carbon. Under the anti-dumping rules, importers of steam activated carbon from China are potentially required to pay anti-dumping duties. The United States Department of Commerce (Commerce Department) conducts reviews in order to determine whether changes (increases or decreases) should be made to the anti-dumping tariff rate applicable to any foreign exporter. These retrospective reviews occur annually while the anti-dumping duty order (the order) is in effect (the current order is scheduled to expire in March 2017). Refer to Note 16 of the consolidated financial statements in Item 8 of this Annual Report for further details. The Company s most recent announced price increase was in February 2013.

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Raw material costs for production in 2016 are expected to be comparable to 2015. The most significant raw material cost is coal. The quantity of coal consumed varies based on the overall production levels achieved as well as the mix of products manufactured during the year. As of December 31, 2015, the Company has approximately 84% of its 2016 anticipated coal requirements under contract or in inventory.

The Company continues to make research and development expenditures related to its advanced FLUEPAC® products. These products were introduced to significantly reduce the amount of powdered activated carbon (PAC) required for mercury removal from coal-fired power plant flue gas when compared to competing products. PAC is recognized today by the EPA as the leading abatement technology for mercury removal from coal-fired power plant flue gas. On December 21, 2011, the EPA issued the MATS regulation requiring mercury and other substances to be removed from the flue gas of coal-fired power plants. The final MATS regulation became effective on April 16, 2012. Compliance with MATS was required in April 2015, however, newly installed equipment and/or plants determined to be on reliability critical paths were able to get extensions of up to an additional two years. On June 29, 2015, the U.S. Supreme Court in a 5-4 decision reversed the decision of the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) which held that the EPA did not need to consider costs when deciding to regulate power plant emissions and remanded the case back to the D.C. Circuit. On December 15, 2015, the D.C. Circuit ordered that the MATS Rule (the Rule) be remanded to the EPA without vacatur. In late February, 2016, 20 states petitioned the U.S. Supreme Court to enjoin the MATS rule pending a petition for a writ of certiorari. Pending the result of this latest U.S. Supreme Court challenge, we expect the EPA to issue a final finding under 42 U.S.C. § 7412(n)(1)(A) by April 15, 2016. It is the expectation of the Company that the EPA will keep the Rule and the current compliance dates in place, continuing to drive utilities to treat for mercury using FLUEPAC® products. There are also mercury removal regulations for the flue gas of coal-fired power plants that remain in effect for certain states and Canadian provinces.

In addition to MATS, the EPA has promulgated mercury removal regulations related to industrial boilers and cement manufacturers. Compliance dates for cement manufacturers and industrial boilers were September 9, 2015 and January 31, 2016, respectively.

The Company still believes that mercury removal could become the largest North American market for activated carbon and has made great strides in establishing itself as a market leader. Based on standard carbon products, the Company estimates the annual demand for mercury removal in North America may grow to as much as 290 million to 400 million pounds by 2017. The Company s advanced products for mercury removal which have carbon usage rates of 50% to 90% less than alternative products, are important to its ongoing success in this market. Market acceptance of the Company s advanced FLUEPAC® products is growing. Bidding activity with electric utilities has been active and is resulting in the receipt of significant, new orders for the Company s FLUEPAC® products. The Company currently believes approximately one-third of this market is represented by the 19 states and certain Canadian provinces that have regulations in place that require mercury removal. The Company estimates that those utilities that were required to comply with the MATS regulation in April 2015 also comprise approximately one-third of the potential mercury removal market with the remaining approximate one third of the potential market being comprised of utilities that have received extensions to MATS regulation. In 2014, the Company s sales into this market totaled approximately $28.7 million. During 2015, the Company reported sales of approximately $58.2 million, an increase of approximately 103% versus the comparable period in 2014. The Company s expectation is that its ongoing share of the value of this market will be at least 30%.

Compliance with other emissions regulations such as the EPA s Cross State Air Pollution Rule (CSAPR) and Carbon Pollution Standards (CPS) could significantly impact the amount of carbon utilized by electric utilities for compliance with MATS. In September 2013, the EPA released a Carbon Pollution Standards proposal for new electric generating units. The standards for new units are likely to have little impact on activated carbon usage in the future; however, in August of 2015, the EPA finalized CPS for existing electric generating units. The Company continues to evaluate the rule, but believes that the CPS for existing units could have a negative impact on future activated carbon demand for electric generators, should generators opt to retire or repower their coal-fired electric generation units. The Company believes the majority of U.S. electric utilities are still working to understand CSAPR and CPS s impact before implementing an integrated treatment approach to more broadly address how to invest in pollution control equipment across their power plant fleet. In addition, ongoing low natural gas costs are impacting this market as electric generation facilities shift production from coal to natural gas.

In addition to mercury regulations in North America, China has announced plans for mercury removal from its coal-fired power plants. The plans, as announced, stipulate levels of mercury removal that would not likely result in large activated carbon sales. However, trials will purportedly be conducted to establish removal requirements.

Treatment of municipal drinking water remains a long term growth area for the Company. An important driver of recent growth (2009 through 2014) was the reduction of Disinfection Byproducts (DBPs). DBPs are compounds that form when naturally occurring organic materials in drinking water sources react with disinfection chemicals. Granular activated carbon (GAC) is recognized by the EPA as a best available control technology (BACT) for the reduction of DBPs in drinking water. While the expansion of GAC adoption related to the EPA s Stage 2 Disinfectants and Disinfection Byproducts Rule (the DBP Rule) has slowed, the Company expects to see new business over the next several years as municipalities continue with the DBP Rule compliance activities. There is

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potential for new DBP GAC installations related to two areas. First, mostly medium and small water utilities who have not achieved compliance with the DBP Rule could adopt GAC for DBP control. Second, utilities that currently use alternative disinfectants, such as chloramines, as their primary means to comply with Stage 2 may adopt GAC/chlorine for DBP Rule compliance. Disinfection with chloramines can result in the formation of emerging classes of DBPs, many of which are not yet regulated but are under study by the EPA. The EPA has now begun its Six Year Review of the DBP Rule, and a new Stage 3 Rule, which could drive additional GAC sales. Although we do not expect a DBP Stage 3 rule limiting the use of chloramines or the DBPs formed by chloramine disinfection to go into effect for a number of years, the volume of GAC required to meet these needs could be significant. We estimate that the municipal water systems in ten of the largest cities in the U.S. that currently use chloramines to meet their DBP Stage 2 compliance requirements would need initial installations, in the aggregate, of approximately 400 million pounds of GAC. Once on line, these new installations would require periodic replacement or reactivation to meet their water treatment needs. Some of these utilities are already involved in studies or pilot test programs to evaluate the use of GAC to meet their DBP treatment needs. It is possible that some of these, or other municipalities that are treating for DBPs using chloramines, will choose to switch to GAC prior to the issuance of a DBP Stage 3 regulation.

Throughout 2015, we noticed an increase in the time between GAC exchange and reactivation services by customers who are relatively new to using GAC for treating DBP precursors. As they gain experience in using GAC, they are also focusing on optimizing its use in combination with other technologies to minimize their overall costs of treating their water supplies. In the short term this has reduced the volume of the reactivation exchange market from our previous expectations. However, these full-scale drinking water treatment operations demonstrates that GAC provides effective DBP protection for longer periods of time confirm the favorable economics of GAC with CMR. In fact, the Company can use an updated model that comprehends the elongated exchange frequency to show that using GAC is an even less expensive solution than previously thought. We believe use of this information could enhance our ability to convert the approximately 8000 largest municipal water systems in North America to adopt the use of GAC with CMR services for their water treatment needs. As such, we expect that the use of GAC by municipalities for treating their water supplies for DBPs or other contaminants, and our related CMR services, will continue to increase.

In addition, a number of other factors are contributing to continued growth of the Company s municipal drinking water business. Harmful algal blooms can present a human health risk to community drinking water supplies; both GAC and PAC have been used successfully to protect against the intrusion of algal toxins in drinking water systems. Use of GAC can protect water treatment plants from the harmful effects of algal bloom toxicity, while increased dosing of PAC can also help when algal blooms are detected. There has been an increased public awareness and sensitivity to man-made chemical contaminants in drinking water systems. These chemicals from industrial processes can contaminate groundwater wells and are currently unregulated. It is expected that these contaminants will be regulated in the upcoming EPA cVOC Groundwater Rule. Chemical spills in waterways that serve as sources for drinking water highlight the need for utilities that draw from such sources to provide barrier defenses against such events. GAC is an ideal technology for this purpose and we expect growth in this area as more utilities look to install GAC to provide protection against spills. The drought conditions that remain prevalent in the western United States are also driving increased interest in direct potable reuse, where wastewater is further treated via advanced technologies such as GAC and ultraviolet light and then fed directly into the drinking water supplies. While the number of communities that have instituted direct potable reuse is currently small, many more are now studying implementation of this approach, driven by the scarcity of water.

As more municipalities move to install GAC for the various reasons mentioned, the Company expects to see growth in its custom municipal reactivation (CMR) service business. In many cases, municipalities engage in a long term plan for CMR services at the time of their initial fill of GAC. In other circumstances, customers convert to the use of CMR services, rather than replacing spent carbon with virgin GAC, due to the affordability of this process. CMR business arrangements can be through either multi-year contracts for the services or through a periodic bidding process when the service is required.

In Europe, the Company was awarded a multi-year contract by a large water provider in the United Kingdom (UK). The Company will supply virgin carbon and reactivation services for up to a ten year period and plans to restart and upgrade its Tipton plant in the UK for that purpose. The planned upgrades are estimated to require $9.5 million of capital. This plant has been undergoing equipment modifications and a significant capacity expansion to over 20 million pounds of reactivation capacity per year. The plant should return to operation with the additional capacity and planned upgrades completed in the first quarter of 2016.

China also announced that it will commit billions of dollars to water and wastewater improvements. Investments are underway, but have been slower than anticipated. The Company continues to monitor this situation closely. China has also tightened the regulations for VOC emissions, which is resulting in new reactivation opportunities.

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Equipment

The Company s equipment business is somewhat cyclical in nature and depends on both regulations and the general health of the overall economy. The Company believes that global demand for its ultraviolet light (UV) systems will continue for a variety of applications including drinking water, waste water, and advanced oxidation.

The Company also believes that demand for its ballast water treatment systems will grow. The U.S. Coast Guard (USCG) issued its ballast water treatment rule on March 23, 2012 (Coast Guard Rule). The Coast Guard Rule addresses the transportation of potentially harmful organisms through ballast water and ultimately requires U.S. Type Approval for treatment systems used in U.S. waters. Ships wishing to release ballast water into U.S. waters must operate an acceptable treatment system on all ships built after December 1, 2013; on medium ballast water capacity ships after their first dry-dock after January 1, 2014; and, on small and large ballast water capacity ships after their first dry-dock after January 1, 2016. Ship operators can seek an extension of the fore mentioned compliance dates from the USCG by citing the lack of availability of U.S. Type Approved ballast water treatment systems. As of January 15, 2016, 3,866 such extensions have been granted to operators that otherwise would have been required to purchase ballast water treatment equipment under the Rule. The granting of these extensions despite the existence of acceptable but not yet U.S. Type Approved systems (like the Hyde GUARDIAN®) has had a dampening effect on the market. The Coast Guard Rule s discharge limits match the numerical limits proposed by the International Maritime Organization (IMO) but the USCG is more prescriptive as to testing methodology than is the IMO. The only test method currently referenced in the Coast Guard Rule cannot measure the effectiveness of UV based systems like the Company s Hyde GUARDIAN® and the other best selling systems. In December 2015, the USCG decided it would not allow the Company, and several other manufacturers of ultraviolet light-based ballast water treatment systems, to use the Most Probable Number (MPN) test method for purposes of testing the Company s system to apply for type approval under USCG regulations. Although the Company has appealed the USCG s decision, its ramifications, if upheld, could have an adverse effect on the Company s ability to compete in the market for ballast water treatment systems for vessels discharging ballast water in U.S. waterways and ports, or cause the Company to invest time and incur additional expenses to redesign its system.

There are five Independent Laboratories (IL) approved by the USCG to work with manufacturers in the Type Approval process: NSF International (NSF), located in Ann Arbor, Michigan, Det Norske Veritas (DNV) AS, located in Hovik, Norway, Korean Register of Shipping, located in Busan, Korea, Control Union Certifications BV located in the Netherlands, and Lloyd s Register EMEA located in the United Kingdom. The IL s have begun working with manufacturers on testing for U.S. Type Approval a process that is expected to take from one to three years. In the interim, ships may discharge ballast water in U.S. ports for a period of five years after their original compliance date if they operate a ballast water treatment system that has been designated as an Alternate Management System (AMS) by the USCG. To qualify for this status, the equipment supplier must possess an international Type Approval, and must demonstrate to the USCG that the equipment performs at least as well as ballast water exchange. The Company was granted AMS status for its Hyde GUARDIAN® ballast water treatment system effective April 15, 2013.

In 2004, the IMO adopted the International Convention for the Control and Management of Ships Ballast Water and Sediments (BWMC) which, like the Coast Guard Rule, addresses the transportation of potentially harmful organisms through ballast water. The regulations requiring ballast water treatment will become effective one year after 30 countries representing 35% of the world s shipping tonnage ratify the BWMC. The BWMC has now been signed by 47 countries representing 34.35% of the world s current shipping tonnage. The BWMC is expected to be phased in over a six-year period following ratification and, coupled with the Coast Guard Rule, will require an estimated 64,000 vessels to install ballast water treatment systems. The Company believes that the total ballast water treatment market for equipment will approximate $18 billion to $28 billion after ratification of the BWMC. Factors influencing the size of the market include the number of manufacturers who are ultimately able to effectively serve this market and ongoing uncertainties surrounding the USCG type approval process.

The Hyde GUARDIAN® system, which employs filtration and ultraviolet light technology to filter and disinfect ballast water, offers cost, safety, and technological advantages. Hyde GUARDIAN® has received Type Approval from Lloyd s Register on behalf of the U.K. Maritime and Coast Guard Agency which confirms compliance with the IMO Ballast Water Management Convention. Hyde GUARDIAN® has also received Class Society Type Approval from Lloyd s Register (LR), American Bureau of Shipping (ABS), and Russian Maritime Registry of Shipping (RS). The strategic acquisition of Hyde Marine provided the Company immediate entry into a global, regulation driven market with major long-term growth potential. To date, most of the Hyde GUARDIAN® systems sold have been for new ship builds but long term, most of Hyde s sales are expected to be for systems retrofitted into existing ships. During 2012, 2013, 2014 and 2015, the number of new ship builds was significantly lower than in prior years and the retrofit market for ballast water equipment has been slow to ramp up owing to the delay in ratification of the IMO BWMC and the fore mentioned USCG extensions. This, along with the more recent shift in oil and gas economics has suppressed the number of Hyde GUARDIAN® orders received. During 2015, the Company sold 50 ballast water treatment systems. During 2014, 2013, 2012, and 2011, the Company sold 113, 64, 68 and 82 ballast water treatment systems, respectively. Subsequent to the January 2010 acquisition of Hyde Marine, the Company has sold approximately 450 systems valued at nearly $88 million.

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Backlog for the Equipment segment as of December 31, 2015 was $18.5 million, while backlog as of December 31, 2014 was $19.8 million.

Consumer

The Company s Consumer segment supplies activated carbon cloth for use in medical, military, and specialty applications. The Company anticipates future growth in medical applications for wound care as its cloth aids in the healing process while providing odor control. The Company recently began to dedicate marketing and sales resources to this area of its business, and expects to see modest annual growth beginning in 2016.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk:

Commodity Price Risk

In the normal course of its business, the Company is exposed to market risk or price fluctuations related to the production of activated carbon products. Coal and natural gas, which are significant to the manufacturing of activated carbon, have market prices that fluctuate regularly. Based on the estimated 2016 usage and price of coal and natural gas not under contract as of January 1, 2016, a hypothetical 10% increase (or decrease) in the price of coal and natural gas, would result in the pre-tax loss (or gain) of $0.5 million and $0.6 million, respectively.

To mitigate the risk of fluctuating prices, the Company has entered into long-term contracts or derivative contracts to hedge the purchase of a percentage of the estimated need of coal and natural gas at fixed prices. The future commitments under the long-term contracts, which provide economic hedges, are disclosed within Note 15 of the consolidated financial statements in Item 8 of this Annual Report. The fair value of the cash-flow hedges for natural gas is disclosed in Note 6 of the consolidated financial statements in Item 8 of this Annual Report.

Interest Rate Risk

The Company s net exposure to interest rate risk consists primarily of borrowings under its U.S. and Japanese borrowing arrangements described within Note 8 of the consolidated financial statements in Item 8 of this Annual Report. The Company s U.S. Credit Facility bears interest at rates that are based off of the prime rate, LIBOR, or Fed Funds rate, plus a margin rate based on the Company s leverage ratio. As of December 31, 2015, the Company had $107.7 million of borrowings under the U.S. Credit Agreement. The Company s Japanese loan agreements also bear interest at variable rates. As of December 31, 2015, the Company had $3.7 million of borrowings under the Japanese loan agreements. A hypothetical one percentage point increase in the interest rates on the December 31, 2015 outstanding balances under the Company s variable rate borrowing arrangements would cause annual interest costs to increase by $1.1 million.

Foreign Currency Exchange Risk

The Company is subject to risk of price fluctuations related to anticipated revenues and operating costs, firm commitments for capital expenditures, and existing assets and liabilities denominated in currencies other than U.S. dollars. The Company enters into foreign currency forward exchange contracts and purchases options to manage these exposures. A hypothetical 10% strengthening (or weakening) of the U.S. dollar against the British Pound Sterling, Canadian Dollar, Mexican Peso, Brazilian Real, Chinese Yuan, Japanese Yen, Singapore Dollar, Danish Krone, Swedish Krona, and Euro as of December 31, 2015 would result in a pre-tax loss (or gain) of approximately $1.8 million. The foreign currency forward exchange contracts purchased during 2015 have been accounted for according to ASC 815 Derivatives and Hedging.

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Item 8. Financial Statements and Supplementary Data:

REPORT OF MANAGEMENT

Responsibility for Financial Statements

Management is responsible for the preparation of the financial statements included in this Annual Report. The Consolidated Financial Statements were prepared in accordance with accounting principles generally accepted in the United States of America and include amounts that are based on the best estimates and judgments of management.

Management s Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal controls over financial reporting as defined in Rules 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934. The Company s internal control system is designed to provide reasonable assurance concerning the reliability of the financial data used in the preparation of the Company s financial statements, as well as reasonable assurance with respect to safeguarding the Company s assets from unauthorized use or disposition. However, no matter how well designed and operated, an internal control system can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

Management conducted an evaluation of the effectiveness of the Company s internal control over financial reporting as of December 31, 2015. In making this evaluation, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control Integrated Framework* (2013). Management s evaluation included reviewing the documentation of our controls, evaluating the design effectiveness of controls, and testing their operating effectiveness. Based on this evaluation, management believes that, as of December 31, 2015, the Company s internal controls over financial reporting were effective.

The effectiveness of internal control over financial reporting as of December 31, 2015, has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, who also audited our consolidated financial statements. Deloitte & Touche LLP s attestation report on the effectiveness of our internal control over financial reporting appears on the next page.

Changes in Internal Control

In January 2014, the Company began an SAP re-implementation project aimed at improving the functionality of the Company s enterprise resource planning (ERP) system to support the accounting and reporting processes. This re-implementation was not in response to any identified or perceived deficiency or weakness in the Company s internal control over financial reporting. The system re-implementation was designed, in part, to enhance transactional processing, further automate various business processes through the utilization of new modules within SAP, and provide additional management tools compared to the Company s legacy system.

The Company re-implemented SAP as of July 1, 2015. As a result, the Company experienced certain changes to its processes and procedures which, in turn, resulted in changes to the Company s internal control over financial reporting. As previously disclosed in the Quarterly Report on Form 10-Q for the period ended September 30, 2015, the Company did not maintain effective monitoring controls over user provisioning, which is the process of assigning access to data and transaction execution capabilities within the SAP environment. Sensitive SAP access was not removed within an acceptable timeframe after the implementation resulting in a potential that certain personnel had the opportunity to perform conflicting duties or unauthorized actions within the system.

During the fourth quarter of 2015, the Company re-evaluated and re-implemented monitoring controls over user provisioning within the SAP environment and as of December 31, 2015 they were effective. During 2016, the Company plans to continue to review and evaluate the ERP system functionality to enhance and strengthen internal controls over financial reporting by automating manual processes and standardizing business processes and reporting across the organization.

Other than the changes with respect to the ERP system as described above, there have not been any changes in the Company s internal controls over financial reporting that occurred during the fourth quarter of 2015, which have materially affected, or are reasonably likely to materially affect, the Company s internal control over financial reporting.

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INTERNAL CONTROLS REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of

Calgon Carbon Corporation

Moon Township, Pennsylvania

We have audited the internal control over financial reporting of Calgon Carbon Corporation and subsidiaries (the Company) as of December 31, 2015, based on criteria established in *Internal Control Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management s Annual Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company s internal control over financial reporting based on our audit.

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

A company s internal control over financial reporting is a process designed by, or under the supervision of, the company s principal executive and principal financial officers, or persons performing similar functions, and effected by the company s board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the 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 Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the criteria established in *Internal Control Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2015 of the Company and our report dated February 26, 2016 expressed an unqualified opinion on those financial statements.

/s/ DELOITTE & TOUCHE LLP
Pittsburgh, Pennsylvania
February 26, 2016

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FINANCIAL STATEMENTS REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of

Calgon Carbon Corporation

Moon Township, Pennsylvania

We have audited the accompanying consolidated balance sheets of Calgon Carbon Corporation and subsidiaries (the Company) as of December 31, 2015 and 2014, and the related consolidated statements of comprehensive income, stockholders equity, and cash flows for each of the three years in the period ended December 31, 2015. These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Calgon Carbon Corporation and subsidiaries as of December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company s internal control over financial reporting as of December 31, 2015, based on the criteria established in *Internal Control Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2016, expressed an unqualified opinion on the Company s internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP
Pittsburgh, Pennsylvania
February 26, 2016

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CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Calgon Carbon Corporation

	Year Ended December 31		
(Dollars in thousands except per share data)	2015	2014	2013
Net sales	**$ 535,004**	$ 555,103	$ 547,939
Cost of products sold (excluding depreciation and amortization)	**343,522**	363,014	366,962
Depreciation and amortization	**35,453**	30,470	28,938
Selling, general and administrative expenses	**84,810**	80,860	76,958
Research and development expenses	**6,425**	6,406	6,037
Restructuring income		(252)	(129)
Litigation and other contingencies (Note 16)			284
	470,210	480,498	479,050
Income from operations	**64,794**	74,605	68,889
Interest income	**58**	77	136
Interest expense	**(773)**	(263)	(462)
Other expense net	**(693)**	(1,911)	(1,364)
Income before income tax provision	**63,386**	72,508	67,199
Income tax provision (Note 14)	**19,923**	23,138	21,486
Net income	**43,463**	49,370	45,713
Other comprehensive (loss) income, net of tax (Note 12)			
Foreign currency translation	**(13,013)**	(14,850)	(305)
Defined benefit pension plans	**(116)**	(11,908)	15,268
Derivatives	**(991)**	388	424
Total other comprehensive (loss) income	**(14,120)**	(26,370)	15,387
Total comprehensive income	**$ 29,343**	$ 23,000	$ 61,100
Net income per common share			
Basic	**$ 0.84**	$ 0.93	$ 0.85
Diluted	**$ 0.82**	$ 0.92	$ 0.84
Dividends per common share	**$ 0.20**	$	$
Weighted average shares outstanding, in thousands			
Basic	**51,902**	53,042	53,898
Diluted	**52,709**	53,941	54,671

The accompanying notes are an integral part of these consolidated financial statements.

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CONSOLIDATED BALANCE SHEETS

Calgon Carbon Corporation

(Dollars in thousands except per share data)	December 31 2015		2014	
Assets				
Current assets:				
Cash and cash equivalents	**$**	**53,629**	$	53,133
Receivables (net of allowance of $1,675 and $1,526)		**96,674**		95,232
Revenue recognized in excess of billings on uncompleted contracts		**9,156**		10,763
Inventories		**110,364**		98,446
Deferred income taxes current		**22,537**		19,827
Other current assets		**15,365**		15,561
Total current assets		**307,725**		292,962
Property, plant and equipment, net		**311,019**		290,586
Intangibles, net		**5,961**		6,281
Goodwill		**25,777**		26,197
Deferred income taxes long-term		**2,816**		2,870
Other assets		**3,220**		2,765
Total assets	**$**	**656,518**	$	621,661
Liabilities and Stockholders Equity				
Current liabilities:				
Accounts payable and accrued liabilities	**$**	**53,624**	$	53,614
Restructuring reserve		**92**		280
Billings in excess of revenue recognized on uncompleted contracts		**3,581**		5,430
Payroll and benefits payable		**13,753**		14,725
Accrued income taxes		**2,091**		537
Short-term debt				833
Current portion of long-term debt		**7,500**		
Total current liabilities		**80,641**		75,419
Long-term debt		**103,941**		70,448
Deferred income taxes long-term		**41,383**		31,879
Accrued pension and other liabilities		**36,562**		38,442
Total liabilities		**262,527**		216,188
Commitments and contingencies (Notes 15 and 16)				
Stockholders equity:				
Common stock, $.01 par value, 100,000,000 shares authorized, 57,646,683 and 57,469,389 shares issued		**576**		575
Additional paid-in capital		**181,713**		176,475
Retained earnings		**398,627**		365,594
Treasury stock, at cost, 10,232,612 and 8,196,372 shares		**(145,295)**		(109,661)
Accumulated other comprehensive loss		**(41,630)**		(27,510)
Total stockholders equity		**393,991**		405,473
Total liabilities and stockholders equity	**$**	**656,518**	$	621,661

The accompanying notes are an integral part of these consolidated financial statements.

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CONSOLIDATED STATEMENTS OF CASH FLOWS

Calgon Carbon Corporation

(Dollars in thousands)	Year Ended December 31 2015	2014	2013
Cash flows from operating activities			
Net income	**$ 43,463**	$ 49,370	$ 45,713
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	**35,453**	30,470	28,938
Employee benefit plan provisions	**2,044**	1,186	2,451
Stock-based compensation	**3,761**	3,748	3,128
Deferred income tax expense	**6,782**	9,213	4,935
Restructuring income		(252)	(129)
Restructuring cash payments		(87)	(3,140)
Changes in assets and liabilities net of effects from foreign exchange:			
(Increase) decrease in receivables	**(4,751)**	(3,137)	1,805
(Increase) decrease in inventories	**(14,805)**	7,907	(5,269)
Decrease (increase) in revenue in excess of billings on uncompleted contracts and other current assets	**53**	(5,503)	8,380
Increase (decrease) in accounts payable and accrued liabilities	**1,112**	(4,103)	(14,235)
Pension contributions	**(3,056)**	(3,505)	(4,717)
Other items net	**(175)**	(959)	(1,082)
Net cash provided by operating activities	**69,881**	84,348	66,778
Cash flows from investing activities			
Proceeds from sale of assets and businesses net of cash		451	642
Capital expenditures	**(62,264)**	(63,459)	(30,271)
Government grants received		1,209	1,709
Net cash used in investing activities	**(62,264)**	(61,799)	(27,920)
Cash flows from financing activities			
Japanese working capital loan borrowings short-term (Note 8)	**1,643**	3,330	4,925
Japanese working capital loan repayments short-term (Note 8)	**(2,490)**	(4,301)	(19,142)
U.S. credit agreement borrowings long-term (Note 8)	**111,400**	97,200	113,047
U.S. credit agreement repayments long-term (Note 8)	**(70,400)**	(56,750)	(131,047)
Proceeds of debt obligations			10,476
Reductions of debt obligations		(1,880)	(5,876)
Treasury stock purchased (Note 11)	**(35,634)**	(40,190)	(3,334)
Common stock dividends paid	**(10,430)**		
Proceeds from the exercise of stock options	**1,095**	2,199	4,066
Net cash used in financing activities	**(4,816)**	(392)	(26,885)
Effect of exchange rate changes on cash and cash equivalents	**(2,305)**	(1,966)	2,808
Increase in cash and cash equivalents	**496**	20,191	14,781
Cash and cash equivalents, beginning of year	**53,133**	32,942	18,161
Cash and cash equivalents, end of year	**$ 53,629**	$ 53,133	$ 32,942

The accompanying notes are an integral part of these consolidated financial statements.

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CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY

Calgon Carbon Corporation

(Dollars in thousands)	Common Stock Shares	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Sub-Total	Treasury Stock Shares	Treasury Stock	Total Stockholders Equity
Balance, December 31, 2012	56,450,632	$ 564	$ 168,599	$ 270,511	$ (16,527)	$ 423,147	6,415,176	$ (71,850)	$ 351,297
2013									
Net income				45,713		45,713			45,713
Other comprehensive income, net of tax (Note 12)					15,387	15,387			15,387
Employee and director stock plans	441,084	4	7,438			7,442			7,442
Accelerated share repurchase (Note 11)	340,334	4	(5,717)			(5,713)	(340,334)	5,713	
Share repurchase (Note 11)							146,800	(2,991)	(2,991)
Treasury stock purchased							20,684	(343)	(343)
Balance, December 31, 2013	57,232,050	$ 572	$ 170,320	$ 316,224	$ (1,140)	$ 485,976	6,242,326	$ (69,471)	$ 416,505
2014									
Net income				49,370		49,370			49,370
Other comprehensive loss, net of tax (Note 12)					(26,370)	(26,370)			(26,370)
Employee and director stock plans	237,339	3	6,155			6,158			6,158
Share repurchase (Note 11)							1,930,841	(39,725)	(39,725)
Treasury stock purchased							23,205	(465)	(465)
Balance, December 31, 2014	57,469,389	$ 575	$ 176,475	$ 365,594	$ (27,510)	$ 515,134	8,196,372	$ (109,661)	$ 405,473
2015									
Net income				**43,463**		**43,463**			**43,463**
Other comprehensive loss, net of tax (Note 12)					**(14,120)**	**(14,120)**			**(14,120)**
Cash dividends				**(10,430)**		**(10,430)**			**(10,430)**
Employee and director stock plans	**177,294**	**1**	**5,238**			**5,239**			**5,239**
Share repurchase (Note 11)							**2,002,444**	**(34,952)**	**(34,952)**
Treasury stock purchased							**33,796**	**(682)**	**(682)**
Balance, December 31, 2015	**57,646,683**	**$ 576**	**$ 181,713**	**$ 398,627**	**$ (41,630)**	**$ 539,286**	**10,232,612**	**$ (145,295)**	**$ 393,991**

The accompanying notes are an integral part of these consolidated financial statements.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Calgon Carbon Corporation

(Dollars in thousands, except per share amounts or as otherwise noted)

1. Summary of Accounting Policies

Operations

Calgon Carbon Corporation (the Company) is a global leader in services and solutions for purifying water and air, food, beverage, and industrial process streams. The Company s operations are principally conducted in three business segments: Activated Carbon and Service, Equipment, and Consumer. Each of these segments includes the production, design and marketing of products and services specifically developed for the purification, separation and concentration of liquids and gases and other media. The Activated Carbon and Service segment relies on activated carbon as a base material, while the Equipment segment relies on a variety of methods and materials which involve other products in addition to activated carbon. The Consumer segment supplies activated carbon cloth for use in military, industrial, and medical applications. The Company s largest markets are in the United States, Europe, and Japan. The Company also has markets in Africa, Canada, India, Latin America, and in other parts of Asia.

Principles of Consolidation

The consolidated financial statements include the accounts of majority-owned and controlled subsidiaries. Investments in business entities in which the Company does not have control, but has the ability to exercise significant influence over the operating and financial policies, are accounted for under the equity method. All significant intercompany transactions and accounts have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Labor Agreements

Collective bargaining agreements cover approximately 28% of the Company s labor force as of December 31, 2015 that expire from 2016 through 2019.

Foreign Currency

Substantially all assets and liabilities of the Company s international operations are translated at year-end exchange rates; income and expenses are translated at average exchange rates prevailing during the year. Translation adjustments represent other comprehensive income or loss and are accumulated in a separate component of stockholders equity. Transaction gains and losses are included in Other expense-net.

Revenue Recognition

Revenue and related costs are recognized when goods are shipped or services are rendered to customers provided that ownership and risk of loss have passed to the customer, the price to the customer is fixed or determinable, persuasive evidence of an arrangement exists and collection is reasonably assured. Revenue for major equipment projects is recognized under the percentage of completion method. The Company s major equipment projects generally have a long project life cycle from bid solicitation to project completion. The nature of the contracts are generally fixed price with milestone billings. The Company recognizes revenue for these projects based on the fixed sales prices multiplied by the percentage of completion. In applying the percentage of completion method, a project s percent complete as of any balance sheet date is computed as the ratio of total costs incurred to date divided by the total estimated costs at completion. As changes in the estimates of total costs at completion and/or estimated total losses on projects are identified, appropriate earnings adjustments are recorded during the period that the change is identified. The Company has a history of making reasonably dependable estimates of costs at completion on contracts that follow the percentage of completion method; however, due to uncertainties inherent in the estimation process, it is possible that actual project costs at completion could vary from estimates. The principal components of costs include material, direct labor, subcontracts, and allocated indirect costs. Indirect costs primarily consist of administrative labor and associated operating expenses, which are allocated to the respective projects on actual hours charged to the project utilizing a standard hourly rate.

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Cash and Cash Equivalents

The Company considers all highly liquid, short-term investments made with an original maturity of three months or less to be cash equivalents. From time to time, the Company could have cash deposited with financial institutions in excess of federally insured limits. As of December 31, 2015 and 2014, the Company had zero and $3.1 million, respectively, of cash deposits with U.S. financial institutions in excess of federally insured limits. The Company s foreign subsidiaries held cash and cash equivalents of $45.1 million and $41.7 million as of December 31, 2015 and 2014, respectively. Generally, cash and cash equivalents held by foreign subsidiaries are not readily available for use in the United States without adverse tax consequences.

Concentration of Credit Risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents and customer receivables. The Company places its cash with financial institutions and invests in low-risk, highly liquid instruments. With respect to customer receivables, the Company believes that it has no significant concentration of credit risk as no single customer accounted for more than 10 percent of gross annual revenues as of December 31, 2015. The Company closely monitors the credit risk associated with its customers and to date has not experienced material losses.

Allowance for Doubtful Accounts

The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. The amount of allowance recorded is primarily based upon a periodic review of specific customer transactions that remain outstanding at least three months beyond their respective due dates.

Inventories

Inventories are carried at the lower of cost or market. Inventory costs are primarily determined using the first-in, first-out (FIFO) method.

Property, Plant and Equipment

Property, plant and equipment is recorded at cost. Repair and maintenance costs are expensed as incurred. Depreciation for financial reporting purposes is computed on the straight-line method over the estimated service lives of the assets, which are from 15 to 30 years for land improvements and buildings, 5 to 15 years for furniture, machinery and equipment, 5 to 10 years for customer capital, 5 years for vehicles, and 5 to 10 years for computer hardware and software. Expenditures for new facilities and improvements that substantially extend the capacity or useful life of an asset are capitalized.

Goodwill and Other Intangible Assets

Goodwill represents the excess of the cost of an acquired business over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed in a business combination. Identifiable intangible assets acquired in business combinations are recorded based on their fair values at the date of acquisition. In accordance with guidance within Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 350 Intangibles - Goodwill and Other goodwill and identifiable intangible assets with indefinite lives are not subject to amortization but must be evaluated for impairment. None of the Company s identifiable intangible assets other than goodwill have indefinite lives.

The Company has elected to perform the annual impairment test of its goodwill, as required, on December 31 of each year by initially comparing the fair value of each of the Company s reporting units to their related carrying values. If the fair value of the reporting unit is less than its carrying value, the Company performs an additional step to determine the implied fair value of the goodwill. The implied fair value of goodwill is determined by first allocating the fair value of the reporting unit to all of the assets and liabilities of the unit and then computing the excess of the unit s fair value over the amounts assigned to the assets and liabilities. If the carrying value of goodwill exceeds the implied fair value of goodwill, such excess represents the amount of goodwill impairment, and the Company recognizes such impairment accordingly. Fair values are estimated using discounted cash flows and other valuation methodologies that are based on projections of the amounts and timing of future revenues and cash flows, assumed discount rates and other assumptions as deemed appropriate. The Company also considers such factors as historical performance, anticipated market conditions, operating expense trends and capital expenditure requirements.

The Company s identifiable intangible assets other than goodwill have finite lives. Certain of these intangible assets, such as customer relationships, are amortized using an accelerated methodology while others, such as patents, are amortized on a straight-line basis over their estimated useful lives. In addition, intangible assets with finite lives are evaluated for impairment whenever events or circumstances indicate that their carrying amount may not be recoverable, as prescribed by guidance within ASC 360 Property, Plant, and Equipment.

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Long-Lived Assets

The Company evaluates long-lived assets under the provisions of ASC 360   Property, Plant, and Equipment   which addresses financial accounting and reporting for the impairment of long-lived assets and for long-lived assets to be disposed of. For assets to be held and used, the Company groups a long-lived asset or assets with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. An impairment loss for an asset group reduces only the carrying amounts of a long-lived asset or assets of the group being evaluated. The loss is allocated to the long-lived assets of the group on a pro-rata basis using the relative carrying amounts of those assets, except that the loss allocated to an individual long-lived asset of the group does not reduce the carrying amount of that asset below its fair value whenever that fair value is determinable without undue cost and effort. Estimates of future cash flows to test the recoverability of a long-lived asset group include only the future cash flows 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. The future cash flow estimates used by the Company exclude interest charges.

Fair Value

Fair value is defined as 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. The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity s own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- **Level 1**   Quoted prices (unadjusted) in active markets for identical assets or liabilities;
- **Level 2**   Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and
- **Level 3**   Unobservable inputs that reflect the reporting entity s own assumptions.

The Company s financial instruments, excluding derivative instruments, consist primarily of cash and cash equivalents, short and long-term debt as well as accounts receivable and accounts payable. The fair value of accounts receivable and accounts payable approximates their carrying value because of the short-term maturity of the instruments.

Derivative Instruments

The Company applies ASC 815   Derivatives and Hedging   which establishes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts and for hedging activities. Derivative financial instruments are occasionally utilized by the Company to manage risk exposure to movements in foreign exchange rates or the prices of natural gas. The Company enters into derivative financial instruments with high credit quality counterparties and diversifies its positions among such counterparties. In addition, various master netting arrangements are in place with counterparties to facilitate settlement of gains and losses on these contracts. The Company does not net its derivative positions by counterparty for purposes of balance sheet presentation and disclosure. Changes in the value of the derivative financial instruments are measured at the balance sheet date and recognized in current earnings or other comprehensive income depending on whether the derivative is designated as part of a hedge transaction and meets certain other criteria. The Company does not hold derivative financial instruments for trading purposes.

Pensions

Accounting for pensions involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, extensive use is made of assumptions about inflation, investment returns, mortality, turnover and discount rates. These assumptions are reviewed annually. In determining the expected return on plan assets, the Company evaluates long-term actual return information, the mix of investments that comprise plan assets and future estimates of long-term investment returns. In determining the discount rates for pension obligations, the Company evaluates long-term corporate bonds that receive one of the two highest ratings given by a recognized rating agency.

Amortization of the net gain or loss as a result of experience differing from that assumed and from changes in assumptions is included as a component of net periodic benefit cost for the year. The Company uses a 10% corridor such as if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation or the market-related value of plan assets, the amortization is that excess divided by the average future working lifetime of participating employees expected to receive benefits under the plan or the average remaining life expectancy of the plan s participants if the percentage of actives is less than 10% of the total population. It should be noted that, as only the excess is amortized, this approach will not fully amortize the net gain or loss.

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The Company considers participants whose benefits are frozen to be active participants, and considers the plan population to be all or almost all inactive when at least 90% of the population is inactive. Under this methodology, the gain/loss amounts recognized in accumulated other comprehensive income (loss) are not expected to be fully recognized in benefit cost until the plan is terminated (or an earlier event, like a settlement, triggers recognition) because the average expected remaining service of active participants expected to benefit under the plan or the average expected remaining lifetime of inactive participants over which the amounts are amortized is redetermined each year and amounts that fall within the corridor described above are not amortized.

Stock-Based Compensation

The Company applies ASC 718 Compensation Stock Compensation. In accordance with guidance within ASC 718, compensation expense for stock options is recorded over the vesting period using the fair value on the date of grant, as calculated by the Company using the Black-Scholes model. For time vested restricted stock awards, the nonvested restricted stock grant date fair value, which is the market price of the underlying common stock, is expensed over the vesting period. For certain performance based stock awards, the initial grant date fair value of the performance stock awards that vest subject to a market condition is determined using a Monte Carlo simulation model and is expensed on a straight-line basis over the performance period. For certain performance based stock awards that vest subject to a performance condition, the initial grant date fair value is the market price of the underlying common stock. This fair value is expensed on a straight-line basis over the performance period when it is probable that the performance condition will be achieved. The Company s stock-based compensation plans are more fully described in Note 10.

Net Income per Common Share

Basic net income per common share is computed by dividing net income by the weighted average number of common shares outstanding during the period. Diluted net income per common share is computed by dividing net income by the weighted average number of common shares outstanding plus all potential dilutive common shares outstanding during the period. Potential dilutive common shares are determined using the treasury stock method. Under the treasury stock method, exercise of options is assumed at the beginning of the period when the average stock price during the period exceeds the exercise price of outstanding options and common shares are assumed issued. The proceeds from exercise are assumed to be used to purchase common stock at the average market price during the period. The incremental shares to be issued are considered to be the potential dilutive common shares outstanding.

Income Taxes

Deferred tax assets and liabilities are recognized for the future tax consequences of temporary differences between the book and tax basis of assets and liabilities. If it is more likely than not that some portion or all of a deferred tax asset will not be realized, a valuation allowance is recognized. The Company assesses its ability to realize deferred tax assets based on normalized historical performance and on projections of future taxable income in the relevant tax jurisdictions. Normalized historical performance for purposes of this assessment includes adjustments for those income and expense items that are unusual and non-recurring in nature and are not expected to affect results in future periods. Such unusual and non-recurring items include the effects of legal fees or settlements associated with specific litigation matters and restructuring costs. The Company s projections of future taxable income considers known events, such as the passage of legislation or expected occurrences, and do not reflect a general growth assumption. The Company s estimates of future taxable income are reviewed annually or whenever events or changes in circumstances indicate that such projections should be modified.

The Company utilizes guidance within ASC 740 Income Taxes regarding the accounting for uncertainty in income taxes. This guidance prescribes recognition and measurement standards for a tax position taken or expected to be taken in a tax return. According to this guidance, the evaluation of a tax position is a two step process. The first step is the determination of whether a tax position should be recognized in the financial statements. The benefit of a tax position taken or expected to be taken in a tax return is to be recognized only if the Company determines that it is more likely than not that the tax position will be sustained upon examination by the tax authorities based upon the technical merits of the position. In step two, for those tax positions which should be recognized, the measurement of a tax position is determined as being the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement.

No provision is made for U.S. income taxes on the undistributed earnings of non-U.S. subsidiaries because these earnings are intended to be indefinitely reinvested outside the United States. These earnings would become subject to income tax if they were remitted as dividends, were loaned to the Company or a U.S. affiliate, or if the Company were to sell its ownership interest in the subsidiaries.

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Leases

The Company leases certain facilities, equipment and vehicles. Certain of the Company s leases contain renewal options, rent escalation clauses and landlord incentives. Renewal terms generally reflect market rates at the time of renewal. Rent expense for noncancelable operating leases with scheduled rent increases or landlord incentives is recognized on a straight-line basis over the lease term, including any applicable rent holidays, beginning with the lease commencement date. The excess of straight-line rent expense over scheduled payment amounts and landlord incentives is recorded as a deferred liability.

Contingencies

The Company from time to time is subject to various legal proceedings, lawsuits and claims, including employment, product warranty and environmental matters of the nature considered normal to its business. It is the Company s policy to accrue for amounts related to the legal matters when it is probable that a liability has been incurred and the loss amount is reasonably estimable. Estimates are developed through consultation with legal counsel involved in the defense and are based upon an analysis of probable results, assuming a combination of litigation and settlement strategies. Legal fees associated with defending these various lawsuits and claims are expensed when incurred.

Government Grants

The Company s policy for accounting for government grants, including non-monetary grants at fair value, is to recognize them only when there is reasonable assurance that (a) the Company will comply with the conditions attached to the grants and (b) the grants will be received. A grant will be recognized as income over the period necessary to match it to the related costs, for which it is intended to compensate, on a systematic basis. Grants related to assets are presented by deducting them from the asset s carrying amount. A grant related to income will be deducted from the related expense.

New Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, Revenue (Topic 606): Revenue from Contracts with Customers which outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The core principle of ASU 2014-09 is that an entity should recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services by applying five steps listed in the guidance. ASU 2014-09 also requires disclosure of both quantitative and qualitative information that enables users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from customers. In August 2015, the FASB issued ASU 2015-14, which defers the effective date of ASU 2014-09 by one year. The new guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption is permitted as of annual reporting periods beginning after December 15, 2016. Entities have the option of using either a full retrospective or a modified retrospective approach. The Company is evaluating the provisions of this ASU and assessing the impact it may have on the Company s consolidated financial statements and related disclosures.

In July 2015, the FASB issued ASU 2015-11, Simplifying the Measurement of Inventory which requires entities to measure most inventory at the lower of cost and net realizable value. This simplifies the current guidance under which an entity measures inventory at the lower of cost or market. Market in this context is defined as one of three different measures, one of which is net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The new guidance is effective for fiscal years beginning after December 15, 2016. This ASU should be applied prospectively with earlier application permitted as of the beginning of an interim or annual reporting period. The adoption of this ASU is not expected to have a material impact on the Company s consolidated financial statements.

In November 2015, the FASB issued ASU 2015-17, Balance Sheet Classification of Deferred Taxes which requires that all deferred tax assets (DTAs) and deferred tax liabilities (DTLs), along with any related valuation allowance, be classified as noncurrent in a classified balance sheet. Netting of DTAs and DTLs by tax jurisdiction is still required under the new guidance. The new guidance is effective for annual periods beginning after December 15, 2016 and interim periods within those annual periods. The amendments in this update may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. The adoption of this ASU will result in a reclassification between current and noncurrent assets on the Company s consolidated financial statements.

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2. Inventories

	December 31			
	2015		2014	
Raw materials	**$**	**23,327**	$	26,860
Finished goods		**87,037**		71,586
Total	**$**	**110,364**	$	98,446

Inventories are recorded net of reserves of $2.4 million and $2.3 million for obsolete and slow-moving items as of December 31, 2015 and 2014, respectively.

3. Property, Plant and Equipment

	December 31			
	2015		2014	
Land and improvements	**$**	**32,522**	$	26,209
Buildings		**67,841**		68,046
Machinery, equipment and customer capital		**458,975**		466,223
Computer hardware and software		**41,850**		27,158
Furniture and vehicles		**10,534**		8,570
Construction-in-progress		**32,141**		29,194
		643,863		625,400
Less accumulated depreciation		**(332,844)**		(334,814)
Net	**$**	**311,019**	$	290,586

Depreciation expense for the years ended December 31, 2015, 2014, and 2013 totaled $33.7 million, $28.2 million, and $26.8 million, respectively.

4. Goodwill and Other Identifiable Intangible Assets

The Company has elected to perform the annual impairment test of its goodwill, as required, on December 31 of each year. For purposes of the test, the Company has identified six reporting units as defined within ASC 350 Intangibles Goodwill and Other at a regional level for the Activated Carbon and Service segment and at the technology level for the Equipment segment and has allocated goodwill to these reporting units accordingly. These reporting units consist of the Activated Carbon and Service segment which is segregated into two regional reporting units, the Americas/Asia and Europe, the Equipment segment which is segregated by technology (a) carbon adsorption, (b) ultraviolet light, and (c) ion exchange, and the Consumer segment which includes the charcoal cloth reporting unit. The goodwill associated with the Consumer segment is not material and has not been allocated below the segment level.

The changes in the carrying amount of goodwill by segment for the years ended December 31, 2015 and 2014 are as follows:

	Activated Carbon and Service Segment	Equipment Segment	Consumer Segment	Total
Balance as of January 1, 2014	$ 19,961	$ 6,531	$ 60	$ 26,552
Foreign currency translation	(208)	(147)		(355)
Balance as of December 31, 2014	19,753	6,384	60	26,197
Foreign currency translation	(149)	(271)		(420)
Balance as of December 31, 2015	**$ 19,604**	**$ 6,113**	**$ 60**	**$ 25,777**

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The following is a summary of the Company s identifiable intangible assets as of December 31, 2015 and 2014, respectively:

	December 31, 2015				
	Weighted Average Amortization Period	Gross Carrying Amount	Foreign Exchange	Accumulated Amortization	Net Carrying Amount
Amortized intangible assets:					
Patents	**20.0 Years**	$ **676**	**$**	**$ (656)**	**$ 20**
Customer Relationships	**15.9 Years**	**10,450**	**(303)**	**(9,526)**	**621**
Product Certification	**7.2 Years**	**10,954**	**(95)**	**(6,259)**	**4,600**
Unpatented Technology	**20.0 Years**	**3,183**		**(2,996)**	**187**
Licenses	**20.0 Years**	**964**	**(119)**	**(312)**	**533**
Total	**13.8 Years**	$ **26,227**	**$ (517)**	**$ (19,749)**	**$ 5,961**

	December 31, 2014				
	Weighted Average Amortization Period	Gross Carrying Amount	Foreign Exchange	Accumulated Amortization	Net Carrying Amount
Amortized intangible assets:					
Patents	20.0 Years	$ 676	$	$ (636)	$ 40
Customer Relationships	15.9 Years	10,450	(270)	(9,198)	982
Product Certification	6.0 Years	9,470	(62)	(5,182)	4,226
Unpatented Technology	18.4 Years	3,183		(2,722)	461
Licenses	20.0 Years	964	(117)	(275)	572
Total	12.7 Years	$ 24,743	$ (449)	$ (18,013)	$ 6,281

For the years ended December 31, 2015, 2014 and 2013, the Company recognized $1.7 million, $2.2 million, and $2.1 million, respectively, of amortization expense related to intangible assets. The Company estimates amortization expense to be recognized during the next five years as follows:

For the year ending December 31:	
2016	$ 1,549
2017	901
2018	717
2019	510
2020	420

5. Fair Value Measurements

The following financial instrument assets (liabilities) are presented below at carrying amount, fair value, and classification within the fair value hierarchy (refer to Notes 6 and 8 for details relating to derivative instruments and borrowing arrangements). The only financial instruments measured at fair value on a recurring basis are derivative instruments and the acquisition earn-out liability:

	Fair Value Hierarchy Level	December 31, 2015 Carrying Amount	December 31, 2015 Fair Value	December 31, 2014 Carrying Amount	December 31, 2014 Fair Value
Cash and cash equivalents	1	**$ 53,629**	**$ 53,629**	$ 53,133	$ 53,133
Derivative assets	2	**468**	**468**	2,155	2,155
Derivative liabilities	2	**(783)**	**(783)**	(861)	(861)
Acquisition earn-out liability	2	**(163)**	**(163)**	(670)	(670)
Short-term debt	2			(833)	(833)
Long-term debt, including current portion	2	**(111,441)**	**(111,441)**	(70,448)	(70,448)

Accounts receivable and accounts payable included in the consolidated balance sheets approximate fair value and are excluded from the table above. The fair value of cash and cash equivalents are based on quoted prices. The fair value of derivative assets and liabilities are measured based on inputs from market sources that aggregate data based upon market transactions. Fair value for the acquisition earn-out liability is based upon Level 2 inputs which are periodically re-evaluated for changes in future projections and the

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discount rate. This liability is recorded in accrued pension and other liabilities within the Company s consolidated balance sheets. The Company s debt primarily bears interest based on the prime rate, LIBOR, or Fed Funds rate and, accordingly, the carrying value of these obligations equals fair value.

6. Derivative Instruments

The Company uses foreign currency forward exchange contracts and foreign exchange option contracts to limit the exposure of exchange rate fluctuations on certain foreign currency receivables, payables, and other known and forecasted transactional exposures for periods consistent with the expected cash flow of the underlying transactions. Management s policy for managing foreign currency risk is to use derivatives to hedge up to 75% of the value of the forecasted exposure. The foreign currency forward exchange and foreign exchange option contracts generally mature within eighteen months and are designed to limit exposure to exchange rate fluctuations.

The Company also uses natural gas forward contracts to limit the exposure to changes in natural gas prices. Management s policy for managing natural gas exposure is to use derivatives to hedge up to 75% of the forecasted natural gas requirements. The natural gas forward contracts generally mature within twenty-four months.

The Company accounts for its derivative instruments under ASC 815 Derivatives and Hedging. Hedge effectiveness is measured on a quarterly basis and any portion of ineffectiveness as well as hedge components excluded from the assessment of effectiveness are recorded directly to current earnings, in other expense net.

The fair value of outstanding derivative contracts in the consolidated balance sheets was as follows:

		December 31	
Asset Derivatives	**Balance Sheet Locations**	**2015**	**2014**
Derivatives designated as hedging instruments:			
Foreign exchange contracts	Other current assets	**$ 411**	$ 1,665
Foreign exchange contracts	Other assets	**6**	182
Derivatives not designated as hedging instruments:			
Foreign exchange contracts	Other current assets	**51**	308
Total asset derivatives		**$ 468**	$ 2,155

		December 31	
Liability Derivatives	**Balance Sheet Locations**	**2015**	**2014**
Derivatives designated as hedging instruments:			
Foreign exchange contracts	Accounts payable and accrued liabilities	**$ 13**	$
Natural gas contracts	Accounts payable and accrued liabilities	**586**	427
Foreign exchange contracts	Accrued pension and other liabilities	**3**	
Natural gas contracts	Accrued pension and other liabilities	**89**	372

Derivatives not designated as hedging instruments:			
Foreign exchange contracts	Accounts payable and accrued liabilities	**92**	62
Total liability derivatives		**$ 783**	$ 861

The Company had the following outstanding derivative contracts that were entered into to hedge forecasted transactions:

	December 31		
(in thousands except for mmbtu)	**2015**	**2014**	**2013**
Natural gas contracts (mmbtu)	**955,000**	810,000	525,000
Foreign exchange contracts	**$ 37,016**	$ 41,237	$ 44,110

The use of derivatives exposes the Company to the risk that a counter party may default on a derivative contract. The Company enters into derivative financial instruments with high credit quality counterparties and diversifies its positions among such counterparties. The aggregate fair value of the Company s derivative instruments in asset positions represents the maximum loss that the Company would recognize at that date if all counterparties failed to perform as contracted. The Company has entered into various master netting arrangements with counterparties to facilitate settlement of gains and losses on these contracts. These arrangements may allow for netting of exposures in the event of default or termination of the counterparty agreement due to breach of contract. The Company does not net its derivative positions by counterparty for purposes of balance sheet presentation and disclosure.

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	December 31, 2015		December 31, 2014	
	Fair Value of Assets	Fair Value of Liabilities	Fair Value of Assets	Fair Value of Liabilities
Gross derivative amounts recognized in the balance sheet	**$ 468**	**$ 783**	$ 2,155	$ 861
Gross derivative amounts not offset in the balance sheet that are eligible for offsetting	**(67)**	**(67)**	(26)	(26)
Net amount	**$ 401**	**$ 716**	$ 2,129	$ 835

Derivatives in Cash Flow Hedging Relationships

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income (loss) (OCI) and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. The location of the gain or (loss) reclassified into earnings (effective portion) for derivatives in cash flow hedging relationships is cost of products sold (excluding depreciation and amortization).

	Amount of Gain or (Loss) Recognized in OCI on Derivatives (Effective Portion) December 31		
	2015	2014	2013
Foreign exchange contracts	**$ 647**	$ 2,095	$ 1,326
Natural gas contracts	**(984)**	(782)	135
Total	**$ (337)**	$ 1,313	$ 1,461

	Amount of Gain or (Loss) Reclassified from Accumulated OCI into Earnings (Effective Portion) (1) December 31		
	2015	2014	2013
Foreign exchange contracts	**$ 2,077**	$ 484	$ 1,018
Natural gas contracts	**(941)**	221	(555)
Total	**$ 1,136**	$ 705	$ 463

(1) Assuming market rates remain constant with the rates as of December 31, 2015, a loss of $0.2 million is expected to be recognized in earnings over the next 12 months.

	Amount of Gain or (Loss) Recognized in Earnings on Derivatives (Ineffective Portion and Amount Excluded from Effectiveness Testing) December 31		
	2015	2014	2013
Foreign exchange contracts	**$**	$	$ 198
Total	**$**	$	$ 198

Derivatives Not Designated as Hedging Instruments

The Company has also entered into certain derivatives to minimize its exposure of exchange rate fluctuations on certain foreign currency receivables, payables, and other known and forecasted transactional exposures. The Company has not qualified these contracts for hedge accounting treatment and therefore, the fair value gains and losses on these contracts are recorded in earnings, in other expense net as follows:

	Amount of Gain or (Loss) Recognized in Earnings on Derivatives December 31		
	2015	**2014**	**2013**
Foreign exchange contracts	**$ (1,042)**	$ (511)	$ 1,256
Total	**$ (1,042)**	$ (511)	$ 1,256

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7. Product Warranties

The Company establishes a warranty reserve for equipment project sales and estimates the warranty accrual based on the history of warranty claims to total sales, adjusted for significant known claims in excess of established reserves.

Warranty terms are based on the negotiated equipment project contract and typically are either 18 months from shipment date or 12 months from project startup date. The change in the warranty reserve, which is included in accounts payable and accrued liabilities in the consolidated balance sheets, is as follows:

	December 31			
		2015		2014
Balance as of January 1	**$**	**1,449**	$	2,196
Payments and replacement product		**(677)**		(1,210)
Additions to warranty reserve for warranties issued during the period		**485**		647
Change in the warranty reserve for pre-existing warranties		**(5)**		(184)
Balance as of December 31	**$**	**1,252**	$	1,449

8. Borrowing Arrangements

	December 31			
Short-Term Debt		2015		2014
Borrowings under Japanese Working Capital Loan	**$**		$	833
Total Short-Term Debt	**$**		$	833

	December 31			
Long-Term Debt		2015		2014
U.S. Credit Agreement Borrowings	**$**	**107,700**	$	66,700
Japanese Term Loan Borrowings		**3,741**		3,748
Total Long-Term Debt	**$**	**111,441**	$	70, 448
Less Current Portion of Long-Term Debt		**(7,500)**		
Net Long-Term Debt	**$**	**103,941**	**$**	70,448

U. S. Credit Agreement

On November 6, 2013, the Company entered into the U.S. Credit Agreement (Credit Agreement) which provides for a senior unsecured revolving credit facility (Revolver) in an amount up to $225.0 million which was originally set to expire on November 6, 2018. On November 6, 2014, an amendment was signed to the Credit Agreement in order to extend the expiration date for one additional year and to release certain guarantors under the Credit Agreement that have nominal value. On November 6, 2015, an additional amendment was signed which extends the Revolver for an additional one-year period to November 6, 2020. A portion of the Revolver not in excess of $75.0 million shall be available for standby or letters of credit for trade, $15.0 million shall be available for swing loans, and $50.0 million shall be available for loans or letters of credit in certain foreign denominated currencies. The Company may have the option to increase the Revolver in an amount not to exceed $75.0 million with the consent of the Lenders. Availability under the Revolver is conditioned upon various customary conditions.

The Credit Agreement also provides for senior unsecured delayed draw term loans (Delayed Draw Term Loans) in an aggregate amount up to $75.0 million which expire on November 6, 2020. The full amount of the Delayed Draw Term Loans is outstanding as of December 31, 2015. Beginning January 1, 2016, quarterly repayments are required equal to 2.5% of the outstanding balance of the Delayed Draw Term Loans, with the remaining balance due on the November 6, 2020 expiration date. As a result, as of December 31, 2015, $7.5 million is shown as current portion of long-term debt within the consolidated balance sheet.

Upon entering into the Credit Agreement, the Company incurred issuance costs of $0.8 million which were deferred and are being amortized over the term of the Revolver and Delayed Draw Term Loan facilities. A quarterly nonrefundable commitment fee is payable by the Company based on the unused availability under the Revolver and the undrawn portion of the Delayed Draw Term Loans and is currently equal to 0.15%.

The interest rate on amounts owed under the Revolver and Delayed Draw Term Loans will be, at the Company s option, either (i) a fluctuating Base Rate or (ii) an adjusted LIBOR rate plus in each case, an applicable margin based on the Company s leverage ratio as set forth in the Credit Agreement. The interest rate charged on amounts owed under swing loans will be either (i) a fluctuating

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Base Rate or (ii) such other interest rates as the lender and the Company may agree to from time to time. The interest rate per annum on outstanding borrowings ranged from 1.25% to 1.40% as of December 31, 2015, and 1.17% to 1.31% as of December 31, 2014.

Total outstanding borrowings under the Revolver were $32.7 million and $21.7 million as of December 31, 2015 and 2014, respectively. Total availability under the Revolver as of December 31, 2015 and 2014 was $189.9 million and $201.1 million, respectively, after considering borrowings and outstanding letters of credit of $2.4 million and $2.2 million, respectively. Total outstanding borrowings under the Delayed Draw Term Loan were $75.0 million and $45.0 million as of December 31, 2015 and 2014, respectively. Total availability under the Delayed Draw Term Loan as of December 31, 2015 and 2014 was zero and $30.0 million, respectively. The outstanding borrowings are shown as current portion of long-term debt and long-term debt within the consolidated balance sheets. Borrowings and repayments are presented on a gross basis within the Company s consolidated statement of cash flows.

Certain of the Company s domestic subsidiaries unconditionally guarantee all indebtedness and obligations related to borrowings under the Credit Agreement. The Company s obligations under the Credit Agreement are unsecured.

The Credit Agreement contains customary affirmative and negative covenants for credit facilities of this type. The Company is permitted to pay dividends so long as the sum of availability under the Credit Agreement and the amount of U.S. cash on hand is at least $50.0 million, and debt is less than or equal to 2.75x earnings before interest, taxes, depreciation and amortization. In addition, the Credit Agreement includes limitations on the Company and its subsidiaries with respect to indebtedness, additional liens, disposition of assets or subsidiaries, and transactions with affiliates. The Company must comply with certain financial covenants including a minimum interest coverage ratio and a maximum leverage ratio as defined within the Credit Agreement. The Company was in compliance with all such covenants as of December 31, 2015. The Credit Agreement also provides for customary events of default, including failure to pay principal or interest when due, breach of representations and warranties, certain insolvency or receivership events affecting the Company and its subsidiaries and a change in control of the Company. If an event of default occurs, the lenders will be under no further obligations to make loans or issue letters of credit. Upon the occurrence of certain events of default, all outstanding obligations of the Company automatically will become immediately due and payable, and other events of default will allow the agent to declare all or any portion of the outstanding obligations of the Company to be immediately due and payable.

Japanese Loans

Calgon Carbon Japan (CCJ) maintains a Term Loan Agreement (Japanese Term Loan) and a Working Capital Loan Agreement (Japanese Working Capital Loan). The Company is jointly and severally liable as the guarantor of CCJ s obligations and the Company permitted CCJ to grant a security interest and continuing lien in certain of its assets, including inventory and accounts receivable, to secure its obligations under both loan agreements. The amount of the assets available to be pledged is in excess of the outstanding obligation as of December 31, 2015.

The Japanese Term Loan provides for a principal amount of 1.0 billion Japanese Yen and bears interest based on the Uncollateralized Overnight Call Rate plus an applicable margin which averaged 0.7% per annum as of December 31, 2015 and 2014. This loan matures on May 10, 2017. As of both December 31, 2015 and 2014, CCJ had 450 million Japanese Yen or $3.7 million outstanding. The outstanding borrowings are shown as long-term debt within the consolidated balance sheets. Borrowings and repayments are presented on a gross basis within the Company s consolidated statements of cash flows.

The Japanese Working Capital Loan provides for borrowings up to 1.5 billion Japanese Yen, and bears interest based on the Short-term Prime Rate, which was 1.475% as of December 31, 2014. During the first quarter of 2015, the maturity date of the Japanese Working Capital Loan was extended to March 31, 2016. Borrowings and repayments under the Japanese Working Capital Loan have generally occurred in short term intervals, as needed, in order to ensure adequate liquidity while minimizing outstanding borrowings. As of December 31, 2015, CCJ had no Japanese Yen outstanding, while as of December 31, 2014 CCJ had 100 million Japanese Yen or $0.8 million outstanding. The outstanding borrowings are shown as short-term debt within the consolidated balance sheets. Borrowings and repayments are presented on a gross basis within the Company s consolidated statements of cash flows.

Chinese Credit Facility

On August 7, 2015, an amendment was signed to the Uncommitted Revolving Loan Facility Letter (Facility Letter) which was effective as of July 19, 2015 and provides for an uncommitted line of credit totaling 5.0 million Renminbi (RMB) or $0.8 million through July 19, 2016. The Company is jointly and severally liable as the guarantor under the Facility Letter. There were no outstanding borrowings under this facility as of December 31, 2015 and 2014.

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Belgian Loan and Credit Facility

The Company maintains an unsecured Belgian credit facility totaling 2.0 million Euros. There are no financial covenants and the Company had no outstanding borrowings under the Belgian credit facility as of December 31, 2015 and 2014, respectively. Bank guarantees of 0.9 million Euros were issued as of December 31, 2015 and 2014, respectively.

United Kingdom Credit Facility

The Company maintains a United Kingdom credit facility for the issuance of various letters of credit and guarantees totaling 0.6 million British Pounds Sterling. Bank guarantees of 0.4 million British Pounds Sterling were issued as of December 31, 2015 and 2014, respectively.

Maturities of Debt

The Company intends to make principal payments on debt outstanding as of December 31, 2015 of $7.5 million in 2016, $11.2 million in 2017, $7.5 million in 2018, $7.5 million in 2019, and $77.7 million in 2020.

Interest Expense

The Company s interest expense for the years ended December 31, 2015, 2014, and 2013 totaled $0.8 million, $0.3 million, and $0.5 million, respectively. These amounts are net of interest costs capitalized of $0.4 million, $0.6 million, and $0.4 million for the years ended December 31, 2015, 2014, and 2013, respectively.

9. Employee Benefit Plans

The Company sponsors defined benefit pension plans covering certain union and non-union employees in the U.S. and Europe. As of December 31, 2015, all of the plans are frozen to new entrants. In addition, two of the U.S. plans and one of the European plans do not allow for existing participants to continue to earn benefits under the plans. The Company uses a measurement date of December 31 for all of its pension plans.

During 2015, the Company incurred a settlement charge of $0.8 million in the plans as a result of employee retirements, and paid $3.8 million from plan assets. During 2014, the Company offered an opportunity to certain eligible terminated vested participants in two of the U.S. plans to elect a lump sum payment of their respective pension benefits which were paid in the fourth quarter of 2014. As a result, the Company incurred a settlement charge of $1.0 million in 2014 related to such elections and paid $4.4 million from plan assets. Also in 2014, the Society of Actuaries released a new mortality table RP-2014, and a new projection scale MP-2014. As a result of these new tables, the Company changed its mortality assumptions for its U.S. plans in 2014. The Company adopted the new RP-2014 mortality table and a modified version of the new MP-2014 projection scale for the U.S. Qualified Plans which resulted in an increase in the projected benefit obligation of approximately $5.8 million in 2014. Also in 2014, the projected benefit obligation increased by approximately $12.3 million due to a change in the discount rate assumption.

U.S. Pension Plans

For U.S. plans, the following table provides a reconciliation of changes in the plans benefit obligations and fair value of assets over the two-year period ended December 31, 2015 and the funded status as of December 31 for both years:

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		2015		2014
Change in Projected Benefit Obligations				
Projected benefit obligations as of January 1	**$**	**117,319**	$	102,309
Service cost		**1,136**		895
Interest cost		**4,499**		4,815
Actuarial (gain) loss		**(7,551)**		17,544
Benefits paid		**(4,022)**		(3,831)
Settlement		**(2,443)**		(4,413)
Projected benefit obligations as of December 31		**108,938**		117,319
Change in Plan Assets				
Fair value of plan assets as of January 1		**98,395**		99,784
Actual return on plan assets		**(3,830)**		5,329
Employer contributions		**1,282**		1,526
Benefits paid		**(4,022)**		(3,831)
Settlement		**(2,443)**		(4,413)
Fair value of plan assets as of December 31		**89,382**		98,395
Funded status as of December 31	**$**	**(19,556)**	$	(18,924)
Amounts recognized in the Balance Sheets:				
Noncurrent asset Other assets	**$**	**273**	$	280
Current liability Payroll and benefits payable		**(82)**		(82)
Noncurrent liability Accrued pension and other liabilities		**(19,747)**		(19,122)
Net amount recognized	**$**	**(19,556)**	$	(18,924)

Amounts recognized in Accumulated Other Comprehensive Income consist of:

		2015		2014
Accumulated prior service cost	**$**		$	15
Accumulated net actuarial loss		**38,741**		38,606
Net amount recognized, before tax effect	**$**	**38,741**	$	38,621

The accumulated benefit obligation as of December 31, 2015 and 2014 was $105.6 million and $113.3 million, respectively.

For U.S. plans, the assumptions used to determine benefit obligations are shown in the following table:

	2015	2014
Weighted average actuarial assumptions as of December 31:		
Discount rate	**4.38%**	4.01%
Rate of increase in compensation levels	**3.00%**	3.00%

The following tables set forth the fair values of the Company s U.S. pension plans assets as of December 31, 2015 and 2014:

Asset Category	Total	Fair Value Measurements as of December 31, 2015 Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and Cash Equivalents	$ 4,300	$ 262	$ 4,038	$
Equity Securities				
Large Cap (a)	19,329	19,329		
Small/Mid Cap (b)	9,598	9,598		
Equities Blend (c)	257	257		
International Equity (d)	5,607	5,607		
Emerging Markets (e)	5,056	5,056		
Fixed Income Securities				
Corporate Bonds (f)	23,777		23,777	
Government Bonds (g)	13,945	1,487	12,458	
International Bonds (h)	3,531		3,531	
Miscellaneous				
Commodities (j)	1,768	1,768		
Real Estate (k)	2,214	2,214		
Total	$ 89,382	$ 45,578	$ 43,804	$

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		Fair Value Measurements as of December 31, 2014		
Asset Category	**Total**	**Quoted Prices In Active Markets for Identical Assets (Level 1)**	**Significant Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Cash and Cash Equivalents	$ 2,610	$	$ 2,610	$
Equity Securities				
Large Cap (a)	21,252	21,252		
Small/Mid Cap (b)	12,906	12,906		
Equities Blend (c)	826	826		
International Equity (d)	9,036	9,036		
Emerging Markets (e)	5,852	5,852		
Fixed Income Securities				
Corporate Bonds (f)	19,179	1,107	18,072	
Government Bonds (g)	15,045	11,968	3,077	
International Bonds (h)	2,588		2,588	
Mortgage/Asset Backed (i)	4,089		4,089	
Miscellaneous				
Commodities (j)	3,077	3,077		
Real Estate (k)	1,935	1,935		
Total	$ 98,395	$ 67,959	$ 30,436	$

(a) This category consists of growth and value strategies investing primarily in the common stock of large capitalization companies located in the United States. Growth oriented strategies seek companies within the Russell 1000 Growth Universe with above average earnings, growth, and revenue expectations. Value oriented strategies seek companies within the Russell 1000 Value Universe that are undervalued relative to their intrinsic value. These strategies are benchmarked against the Russell 1000 Growth and Value Indices, respectively.

(b) This category consists of growth and value strategies investing primarily in the common stock of mid and small capitalization companies located in the United States that are either undervalued relative to their intrinsic value or have above average growth and revenue expectations. These strategies are benchmarked to the Russell 2500 Growth and Value Indices, respectively.

(c) This category invests in the common stock of primarily U.S. companies across the capitalization spectrum (Large, Mid, and Small Cap) that are undervalued relative to their intrinsic value or represent growth opportunities. This strategy is benchmarked to the Russell 3000 Index.

(d) This category consists of international equity securities represented by 21 major MSCI indices from Europe, Australia and Southeast Asia. This strategy is benchmarked to the MSCI EAFE Index.

(e) This category invests in all types of capitalization companies operating in global emerging markets outside the United States. The strategy targets broad diversification across various economic sectors in 21 emerging economies. This category is benchmarked to the MSCI Emerging Markets Index.

(f) This category invests primarily in investment grade corporate securities. This category is benchmarked to the Barclays Aggregate Bond Index.

(g) This category includes securities and mutual funds which invest in a diversified portfolio of longer duration bonds. The funds typically invest primarily in U.S. investment grade securities. The portfolio has an average

duration that normally varies within two years (plus or minus) of the benchmark. This category is benchmarked to the Barclays Capital Long-Term Government/Credit Index.

(h) This category includes securities and mutual funds which invest in a diversified portfolio of longer duration foreign bonds. This category is benchmarked to the Barclays Global Aggregate Index.

(i) This category invests primarily in mortgage-backed securities which cover the mortgage backed securities component of the Barclays US Aggregate Bond Index. This category is benchmarked against the Barclays Mortgage-Backed Securities Index.

(j) This fund invests in assets of commodity linked derivative instruments and fixed income securities. The fund is benchmarked against the Dow Jones-UBS Commodity Index Total Return.

(k) This fund normally invests at least 80% of its assets in equity related securities of real estate companies and other real estate securities. Under normal circumstances, the fund invests in at least three different countries and at least 40% of the total assets are in foreign securities. This strategy is benchmarked to the Lipper Global Real Estate Funds Average.

The Company s investment strategy is to earn the highest possible long-term total rate of return while minimizing the associated risk to ensure the preservation of the plan assets for the provision of benefits to participants and their beneficiaries. This is accomplished by managing a diversified portfolio of fund styles, asset types, risk characteristics and investment holdings.

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As of December 31, 2015 and 2014, the projected benefit obligations, accumulated benefit obligations, and fair value of plan assets for U.S. pension plans with a projected benefit obligation in excess of plan assets, and for pension plans with an accumulated benefit obligation in excess of plan assets was as follows:

	Projected Benefit Obligation Exceeds the Fair Value of Plan s Assets		Accumulated Benefit Obligation Exceeds the Fair Value of Plan s Assets	
	2015	2014	2015	2014
Projected benefit obligation	$ **99,920**	$ 107,682	$ **99,920**	$ 107,682
Accumulated benefit obligation	$ **96,532**	$ 103,690	$ **96,532**	$ 103,690
Fair value of plan assets	$ **80,091**	$ 88,478	$ **80,091**	$ 88,478

Information about the expected cash flows by year for the U.S. pension plans follows:

Employer contributions	
2016	$
Benefit Payments	
2016	$ 6,412
2017	5,851
2018	6,358
2019	6,704
2020	6,966
2021 2025	34,974

The following table provides the components of net periodic pension costs of the U.S. plans:

	Year Ended December 31		
	2015	2014	2013
Service cost	**$ 1,136**	$ 895	$ 1,165
Interest cost	**4,499**	4,815	4,423
Expected return on assets	**(7,070)**	(7,541)	(6,660)
Amortization of prior service cost	**15**	74	74
Net actuarial loss amortization	**2,606**	877	3,519
Settlement	**607**	1,025	
Net periodic pension cost	**$ 1,793**	$ 145	$ 2,521

The 2015 settlement was a result of employee retirements, while the 2014 settlement was a result of an opportunity for certain eligible terminated vested participants to elect a lump sum payment of their respective pension benefits.

Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income (Loss)

	Year Ended December 31		
	2015	2014	2013
Current year actuarial (loss) gain	**$ (3,348)**	$ (19,756)	$ 21,997
Amortization of actuarial loss	**2,606**	877	3,519
Amortization of prior service cost	**15**	74	74
Settlement	**607**	1,025	
Total recognized in other comprehensive income (loss)	**$ (120)**	$ (17,780)	$ 25,590
Total recognized in net periodic pension cost and other comprehensive income (loss)	**$ (1,913)**	$ (17,925)	$ 23,069

The estimated amounts that will be amortized from accumulated other comprehensive income into net periodic pension cost in 2016 are as follows:

Net actuarial loss	$ 3,136
Total as of December 31	$ 3,136

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For U.S. plans, the assumptions used in the measurement of net periodic pension cost are shown in the following table:

	2015	2014	2013
Weighted average actuarial assumptions as of December 31:			
Discount rate	**4.01%**	4.88%	3.92%
Expected annual return on plan assets	**7.50%**	7.75%	7.75%
Rate of increase in compensation levels	**3.00%**	3.50%	4.00%

The discount rates that the Company utilizes for its Qualified Plans to determine pension obligations are based on a review of long-term corporate bonds that receive one of the two highest ratings given by a recognized rating agency. The expected rate of return on plan assets was determined by the Company based on a review of asset class return expectations, as well as long-term inflation assumptions. The Company also considered historical returns on asset classes and investment mix. The expected long-term return on the U.S. Qualified Plans assets is based on an asset allocation assumption of approximately 40%-50% equity securities, 45%-55% fixed income securities, and 5% with other investments. The Company also takes into account the effect on its projected returns from any reasonably likely changes in its asset portfolio when applicable.

European Pension Plans

For European plans, the following tables provide a reconciliation of changes in the plan s benefit obligations and fair value of assets over the two-year period ended December 31, 2015 and the funded status as of December 31 of both years:

	2015	2014
Change in Projected Benefit Obligations		
Projected benefit obligations as of January 1	**$ 42,886**	$ 42,367
Service cost	**288**	342
Interest cost	**1,250**	1,653
Employee contributions	**71**	88
Actuarial loss	**(64)**	4,097
Benefits paid	**(1,091)**	(1,781)
Settlement	**(1,383)**	
Foreign currency exchange rate changes	**(2,756)**	(3,880)
Projected benefit obligations as of December 31	**39,201**	42,886
Change in Plan Assets		
Fair value of plan assets as of January 1	**31,025**	29,586
Actual return on plan assets	**646**	3,529
Employer contributions	**1,774**	1,979
Employee contributions	**71**	88
Benefits paid	**(1,091)**	(1,781)
Settlement	**(1,383)**	
Foreign currency exchange rate changes	**(1,691)**	(2,376)
Fair value of plan assets as of December 31	**29,351**	31,025
Funded Status as of December 31	**$ (9,850)**	$ (11,861)
Amounts Recognized in the Balance Sheets:		

Noncurrent asset	Other assets	**$**	**1,258**	$	1,046
Current liability	Payroll and benefits payable		**(450)**		(498)
Noncurrent liability	Accrued pension and other liabilities		**(10,658)**		(12,409)
Net amount recognized		**$**	**(9,850)**	$	(11,861)

Amounts recognized in Accumulated Other Comprehensive Income consist of:

		2015		**2014**
Accumulated net actuarial loss	**$**	**8,039**	$	8,076
Net amount recognized, before tax effect	**$**	**8,039**	$	8,076

The accumulated benefit obligation as of December 31, 2015 and 2014 was $37.1 million and $41.3 million, respectively.

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For European plans, the assumptions used to determine end of year benefit obligations are shown in the following table:

	2015	2014
Weighted average actuarial assumptions as of December 31:		
Discount rate	**3.15%**	3.00%
Rate of increase in compensation levels	**3.37%**	3.38%

The following tables set forth the fair values of the Company s European pension plans assets as of December 31, 2015 and 2014:

		Fair Value Measurements as of December 31, 2015		
Asset Category	**Total**	**Quoted Prices In Active Markets for Identical Assets (Level 1)**	**Significant Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Cash and Cash Equivalents	**$ 1,997**	**$ 1,997**	**$**	**$**
Equity Securities				
M&G PP Discretionary Fund (a)	**4,673**	**4,673**		
Global Equity 60-40 Index (b)	**5,412**	**5,412**		
Fixed Income Securities				
Delta Lloyd Fixed Income (c)	**1,864**			**1,864**
Corporate Bonds (d)	**5,022**	**5,022**		
Government Bonds (e)	**6,913**	**6,913**		
Real Estate (f)	**2,211**	**2,211**		
Insurance Reserves (g)	**1,259**			**1,259**
Total	**$ 29,351**	**$ 26,228**	**$**	**$ 3,123**

		Fair Value Measurements as of December 31, 2014		
Asset Category	**Total**	**Quoted Prices In Active Markets for Identical Assets (Level 1)**	**Significant Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Cash and Cash Equivalents	$ 611	$ 611	$	$
Equity Securities				
M&G PP Discretionary Fund (a)	4,922	4,922		
Global Equity 60-40 Index (b)	5,475	5,475		
Fixed Income Securities				
Delta Lloyd Fixed Income (c)	3,481			3,481
Corporate Bonds (d)	5,417	5,417		
Government Bonds (e)	7,628	7,628		
Real Estate (f)	2,192	2,192		
Insurance Reserves (g)	1,299			1,299
Total	$ 31,025	$ 26,245	$	$ 4,780

(a) This fund invests in a mix of UK and overseas equity shares, bonds, property and cash. The fund is actively managed against its benchmark of the CAPS Balanced Pooled Fund Median. A prudent approach of diversification by both location and investment type is employed by the fund and both active stock selection and asset allocation are

used to add value.

(b) This index fund invests 60% in the UK Equity Index Fund and 40% in overseas index funds. The overseas portion has a target allocation of 14% in North American funds, 14% in European funds (not including the UK), 7% in Japanese funds, and 5% in Pacific Basin funds (not including Japan).

(c) This category invests in 6 year Fixed Income investments with Delta Lloyd.

(d) This category invests in the M&G PP Discretionary Fund, the AAA Fixed interest - Over 15 Year Fund, and the M&G PP Long Dates Corporate Bond Fund. These funds, respectively, invest primarily in investment grade corporate bonds, as well as other debt instruments, including higher yielding corporate bonds, government debt, convertible and preferred stocks, money market instruments and equities; and in long-dated sterling denominated AAA-rated corporate bonds, as well as smaller holdings in gilts - both providing a fixed rate of interest.

(e) This category invests mainly in long term gilts through the M&G PP Super Long Index Linked Fund and the M&G PP Discretionary Fund.

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(f) *This category invests in the M&G UK Property Fund. The fund invests directly in commercial properties in the UK and is actively managed against its IPD real estate benchmark. The fund is well diversified investing in the retail, office, and industrial sectors of the market. A small portion of this category is also held in the M&G PP Discretionary Fund.*

(g) *This category invests in individual insurance policies in the name of the individual plan members.*

The Company s Level 3 investments in the Delta Lloyd fixed income fund and insurance reserves were valued using significant unobservable inputs. Inputs to these valuations include characteristics and quantitative data relating to the assets and reserves, investment and insurance policy cost, position size, liquidity, current financial condition of the company/insurer and other relevant market data. The following table sets forth changes in fair value measurements using significant unobservable inputs during 2015 and 2014:

	Delta Lloyd Fixed Income	Insurance Reserves
Balance as of January 1, 2014	$ 4,207	$ 1,475
Purchases		163
Sales/Maturities	(259)	(166)
Foreign currency translation	(467)	(173)
Balance as of December 31, 2014	3,481	1,299
Purchases		**139**
Sales/Maturities	**(1,394)**	**(50)**
Foreign currency translation	**(223)**	**(129)**
Balance as of December 31, 2015	**$ 1,864**	**$ 1,259**

As of December 31, 2015 and 2014, the projected benefit obligations, accumulated benefit obligations, and fair value of plan assets for European pension plans with a projected benefit obligation in excess of plan assets, and for pension plans with an accumulated benefit obligation in excess of plan assets was as follows:

	Projected Benefit Obligation Exceeds the Fair Value of Plan s Assets		Accumulated Benefit Obligation Exceeds the Fair Value of Plan s Assets	
	2015	**2014**	**2015**	**2014**
Projected benefit obligation	**$ 28,150**	$ 31,333	**$ 28,150**	$ 31,333
Accumulated benefit obligation	**$ 26,083**	$ 29,698	**$ 26,083**	$ 29,698
Fair value of plan assets	**$ 17,042**	$ 18,426	**$ 17,042**	$ 18,426

Information about the expected cash flows by year for the European pension plans follows:

Employer contributions	
2016	$ 1,874
Benefit Payments	
2016	$ 1,816

2017	1,492
2018	1,445
2019	1,061
2020	1,211
2021 2025	7,462

Total benefits expected to be paid include both the Company s share of the benefit cost and the participants share of the cost, which is funded by participant contributions to the plan.

The following table provides the components of net periodic pension costs of the European plans:

	Year Ended December 31		
	2015	**2014**	**2013**
Service cost	**$ 288**	$ 342	$ 314
Interest cost	**1,250**	1,653	1,511
Expected return on assets	**(1,705)**	(1,549)	(1,263)
Net actuarial loss amortization	**219**	245	203
Settlement	**199**		279
Net periodic pension cost	**$ 251**	$ 691	$ 1,044

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Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive (Loss)

	Year Ended December 31		
	2015	**2014**	**2013**
Current year actuarial loss	**$ (984)**	$ (2,117)	$ (1,046)
Amortization of actuarial loss	**219**	245	203
Settlement	**199**		279
Foreign currency exchange	**603**	818	(292)
Total recognized in other comprehensive income (loss)	**$ 37**	$ (1,054)	$ (856)
Total recognized in net periodic pension cost and other comprehensive (loss)	**$ (214)**	$ (1,745)	$ (1,900)

The estimated amounts that will be amortized from accumulated other comprehensive loss into net periodic pension cost in 2016 are as follows:

Net actuarial loss	$ 235
Total as of December 31	$ 235

For European plans, the assumptions used in the measurement of the net periodic pension cost are shown in the following table:

	2015	**2014**	**2013**
Weighted average actuarial assumptions as of December 31:			
Discount rate	**3.00%**	3.92%	3.99%
Expected annual return on plan assets	**5.54%**	5.23%	4.91%
Rate of increase in compensation levels	**3.38%**	3.50%	3.50%

The expected rate of return on plan assets was determined by the Company based on a review of asset class return expectations as well as long-term inflation assumptions. Projected returns are based on broad equity and bond indices that the Company uses to benchmark its actual asset portfolio performance based on its targeted portfolio mix of approximately 35%-45% equity securities, 45%-55% fixed income securities and 10%-15% other investments. The Company also takes into account the effect on its projected returns from any reasonably likely changes in its asset portfolio when applicable.

The non-current portion of the U.S. and European pension liabilities of $30.4 million and $31.5 million as of December 31, 2015 and 2014, respectively, is included in accrued pension and other liabilities.

Multi-Employer Pension Plan

In addition to the aforementioned European plans, the Company participates in a multi-employer pension plan in Europe. This multi-employer plan almost entirely relates to former employees of operations it has divested. Benefits are distributed by the multi-employer plan. As of

December 31, 2015 and 2014, respectively, the Company has a $0.9 million liability recorded as a component of payroll and benefits payable within its consolidated balance sheets. Refer to Note 16 for further information related to this multi-employer plan.

Defined Contribution Plans

The Company sponsors a defined contribution plan for certain U.S. employees. The plan allows for employee contributions, and the Company can make fixed, matching and discretionary contributions to the plan on behalf of its employees. The Company also makes contributions to the USW 401(k) Plan for certain eligible employees. Total expenses related to the defined contribution plans were $3.1 million, $2.8 million, and $2.5 million for each of the years ended December 31, 2015, 2014, and 2013, respectively.

10. Stock Compensation Plans

As of December 31, 2015, the Company had one stock-based compensation plan that was adopted in 2008 and is described below. The former Employee Stock Option Plan and the Non-Employee Directors   Stock Option Plan (Prior Plans) were terminated and superceded by the 2008 Equity Incentive Plan. The Prior Plans both had stock-based awards outstanding as of December 31, 2015 and 2014. The Prior Plans granted stock options and restricted stock to officers, directors and other key employees of the Company. The stock options were granted at the fair market value on the grant date, became exercisable no less than six months after granted, and, in general, expire ten years after the date of grant.

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2008 Equity Incentive Plan, as amended

In 2008, the Company adopted an equity incentive plan for eligible employees, service providers, and non-employee directors of the Company and its subsidiaries. In 2014, the Company amended and restated the 2008 Equity Incentive Plan to increase the aggregate number of shares available for issuance from 2,000,000 to 5,000,000, and to extend the term for a period of ten years. The plan includes a 1,500,000 share fixed sub-limit for the granting of incentive stock options. The awards may be stock options, restricted stock units, performance units or other stock-based awards. Stock options may be nonstatutory or incentive. The exercise price for options and stock appreciation rights shall not be less than the fair market value on the date of grant, except if an incentive stock option is granted to a 10% employee, as defined by the plan, then the option price may not be less than 110% of such fair market value. Options and stock appreciation rights may be exercisable commencing with the grant date, and are no longer exercisable after the expiration of seven or ten years from the grant date.

Stock-Based Compensation Expense

The following tables show a summary of the status and activity of stock options for the year ended December 31, 2015:

Employees:

	Shares		Weighted-Average Exercise Price (per share)	Weighted-Average Remaining Contractual Term (in years)		Aggregate Intrinsic Value
Outstanding as of January 1, 2015	890,217	$	17.99	5.32	$	2,742
Granted	482,166		20.86			
Exercised	(62,702)		15.89			
Forfeited	(46,920)		20.97			
Expired	(10,625)		18.89			
Outstanding as of December 31, 2015	**1,252,136**	**$**	**19.08**	**5.01**	**$**	**645**
Vested and expected to vest as of December 31, 2015	**1,252,136**	**$**	**19.08**	**5.01**	**$**	**645**
Exercisable as of December 31, 2015	**650,877**	**$**	**17.33**	**4.12**	**$**	**645**

Non-Employee Directors:

	Shares		Weighted-Average Exercise Price (per share)	Weighted-Average Remaining Contractual Term (in years)		Aggregate Intrinsic Value
Outstanding as of January 1, 2015	51,255	$	6.76	1.61	$	664
Granted						
Exercised	(11,370)		5.97			
Forfeited						

Expired						
Outstanding as of December 31, 2015	**39,885**	**$**	**6.99**	**0.81**	**$**	**379**
Vested as of December 31, 2015	**39,885**	**$**	**6.99**	**0.81**	**$**	**379**
Exercisable as of December 31, 2015	**39,885**	**$**	**6.99**	**0.81**	**$**	**379**

The following assumptions were used to calculate the fair values of employee stock option grants in each year:

	Year Ended December 31		
	2015	**2014**	**2013**
Weighted-average grant date fair value per stock option	**$ 3.30**	$ 4.48	$ 4.51
Expected dividend yield	**0.96%**	0.00%	0.00%
Expected volatility	**19%**	21 22%	31%
Risk-free interest rates	**1.48%**	1.51 1.73%	0.78%
Expected lives of options	**4 years**	4 years	4 years

The expected dividend yield is based on the latest annualized dividend rate and the current market price of the underlying common stock at the date of grant. The expected volatility is based on the historical volatility of the Company s stock and the implied volatility calculated from traded options on the Company s stock. The risk-free interest rates are based on the U.S. Treasury strip rate for the expected life of the option. For the 2011 through 2015 grants of stock options, the Company used the simplified method for determining the expected life. This method was used since the Company granted stock options to a different population of its employees, and decreased the term from 10 to 7 years. As a result of these changes, the Company does not believe that the historical stock option exercise data provides a reasonable basis upon which to estimate the expected life for the 2011 through 2015 grants.

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The total grant date fair value of options vested during the years ended December 31, 2015, 2014, and 2013 was $4.49 per share, $4.80 per share, and $5.32 per share, or $1.5 million, $1.3 million, and $1.0 million, respectively.

During the years ended December 31, 2015, 2014 and 2013, the total intrinsic value of stock options exercised (i.e., the difference between the market price at exercise and the price paid by the employee or non-employee directors to exercise the option) was $0.4 million, $1.0 million, and $2.5 million, respectively. The total amount of cash received from the exercise of options was $1.1 million, $2.2 million, and $4.1 million, for the years ended December 31, 2015, 2014, and 2013, respectively.

Restricted and Performance Based Stock Awards

The grant date fair value of time vested restricted stock awards is the market price of the underlying common stock and is expensed over the vesting period of three years.

Performance stock awards, based on Return on Capital (ROC), vest subject to the satisfaction of this performance condition, at the end of a three-year performance period. The Company s actual ROC for the performance period is compared to the target set, and the actual award payout is interpolated. The ROC award can vest at between zero and 200 percent of the target award. The grant date fair value of the ROC performance stock is the market price of the underlying common stock. The fair value is expensed on a straight-line basis over the performance period when it is probable that the performance condition will be achieved. No expense was recognized for these awards as it was not considered probable that the performance condition would be achieved.

Performance stock awards, based on Total Stockholder Return (TSR), vest subject to the satisfaction of this market condition, at the end of a three-year performance period. The Company s actual TSR for the performance period is compared to the results of its peer companies for the same period with the Company s relative position in the group determined by percentile rank. The actual award payout is determined by multiplying the target award by the performance factor percentage based upon the Company s percentile ranking and can vest at between zero and 200 percent of the target award. The initial grant date fair value of the TSR performance stock is determined using a Monte Carlo simulation model. The grant date fair value is expensed on a straight-line basis over the three-year performance period.

The following table shows a summary of the status and activity of employee and non-employee directors nonvested stock awards for the year ended December 31, 2015:

	Restricted Stock	Weighted-Average Grant Date Fair Value	ROC Performance Stock	Weighted-Average Grant Date Fair Value	TSR Performance	Weighted-Average Grant Date