CALGON CARBON CORPORATION
Form 10-K
March 13, 2009

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, 2008 or
oTransition 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.)
400 Calgon Carbon Drive Pittsburgh, Pennsylvania	15205
(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 ¨

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 ¨ 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 ¨

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.

Yes ¨ No x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of “accelerated filer and large accelerated filer” in Rule 12b-2 of the Exchange Act.

Large accelerated filer ¨ Accelerated filer x Non-accelerated filer ¨

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ¨ No x

As of March 10, 2009, there were outstanding 54,469,234 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, 2008 was $609,531,907.

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 Shareholders to be held on April 30, 2009.	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. They involve known and unknown risks and uncertainties that may cause the Company’s 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 higher energy and raw material costs, costs of imports and related tariffs, labor relations, capital and environmental requirements, changes in foreign currency exchange rates, borrowing restrictions, validity of patents and other intellectual property, 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.

PART I

Item 1. Business:

The Company:

The Company is a global leader in services, products, and solutions for purifying water and air. The Company has three reportable segments: Activated Carbon and Service, Equipment, and Consumer. These reportable segments are composed of global profit centers that make and sell different products and services.

The Activated Carbon and Service segment manufactures granular and powdered activated carbon for use in applications to remove organic compounds from water, air, and other liquids and gases. The service aspect of the segment consists of the leasing, monitoring and maintenance of carbon adsorption equipment (explained below). The Equipment segment provides solutions to customers' air and water purification problems through the design, fabrication, and operation of systems that utilize a combination of the Company's enabling technologies: carbon adsorption, ultraviolet light ("UV") and advanced ion exchange separation ("ISEP®") among others. The Consumer segment primarily consists of the manufacture and sale of carbon cloth and new consumer products based on the Company's technologies already proven in large-scale industrial applications.

Discontinued Operations:

On February 17, 2006, the Company, through its wholly owned subsidiary Chemviron Carbon GmbH, executed an agreement (the "Charcoal Sale Agreement") with proFagus GmbH, proFagus Grundstuecksverwaltungs GmbH and proFagus Beteiligungen GmbH (as Guarantor) to sell, and sold, substantially all the assets, real estate, and specified liabilities of the Bodenfelde, Germany facility (the "Charcoal/Liquid business"). The aggregate sales price, based on an exchange rate of 1.19 Dollars per Euro, consisted of $20.4 million of cash, which included a final working capital adjustment of $1.3 million. The Company provided guarantees to the buyer related to pre-divestiture tax liabilities, future environmental remediation costs related to pre-divestiture activities and other contingencies. Management believes the ultimate cost of such guarantees is not material. An additional 4.25 million Euro could have been received dependent upon the business meeting certain earnings targets over the next three years. In May 2008, the Company reached a final agreement with proFagus GmbH, proFagus Grundstuecksverwaltungs GmbH and proFagus Beteiligungen GmbH (as Guarantor) regarding the aforementioned additional 4.25 million Euro contingent consideration, fixing the amount to be paid to the Company at 2.8 million Euro. The Company expects to receive this payment in December 2011. The unpaid balance earns interest at 7% which is paid annually. The Company had presented the Charcoal/Liquid business as a discontinued operation for the periods that were impacted and has recorded a pre-tax gain of $4.8 million or $1.7 million, net of tax, on the sale during the year ended December 31, 2006. The Company recorded the additional contingent consideration as an additional pre-tax gain on sale of $4.4 million or $2.8 million, net of tax, within discontinued operations during the period ended December 31, 2008.

On April 24, 2006, the Company completed the sale of the assets of its Solvent Recovery business to MEGTEC Systems, Inc. ("MEGTEC"), a subsidiary of Sequa Corporation. The Solvent Recovery unit provided turnkey on-site regenerable solvent recovery systems, distillation systems, on-site regenerable volatile organic compound concentrators, vapor-phase biological oxidation systems, and related services on a worldwide basis. The sale price of $1.8 million included cash proceeds of approximately $0.8 million and $0.7 million of assumed liabilities, primarily accounts payable. The transaction was also subject to a pre-tax working capital adjustment of $0.4 million, which management finalized and recorded in the fourth quarter of 2006. For the year ended December 31, 2007, the Company recorded a loss of $0.2 million, net of tax, related to an indemnity claim. During the year ended December 31, 2006, the Company recorded a pre-tax gain of $63 thousand or $41 thousand, net of tax, on the sale of the Solvent Recovery business.

For further information, see Note 3 to the Financial Statements.

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 business segments. The Activated Carbon and Service segment primarily consists of activated carbon products, field services, and reactivation. The Equipment segment designs and builds systems that include multiple technologies. The Consumer segment supplies carbon products, including activated carbon cloth, for everyday use by consumers. Activated carbon cloth is used in many filtration, adsorption, and separation applications for use in such markets such as industrial and medical.

Activated Carbon and Service. The sale of activated carbon is the principle component of the Activated Carbon and Service business segment. Activated carbon is a porous material that removes organic compounds from liquids and gases by a process known as “adsorption.” In adsorption, 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 low temperature bakers 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 for a particular purification application are developed. 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 particles sizes. The Company also markets activated carbons from other raw materials, including coconut 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 which has been pulverized into powder and often used in batch purification processes, in municipal water applications and for flue gas emissions control. Pelletized activated carbons are extruded particles, cylindrical in shape, and 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 are the optional services associated with supplying the Company's products and systems required for purification, separation, concentration, taste and odor control. The Company offers a variety of treatment services at customer facilities 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 equipment. The central component of the Company's service business is reactivation of spent carbon and re-supply. In the reactivation process, the spent carbon is subjected to high temperature re-manufacturing conditions that destroy the adsorbed organics and assure the activated carbon is returned to usable quality. The Company is fully permitted to handle spent carbons containing hazardous and non-hazardous organic compounds (see related discussion in Regulatory Matters). This recycling is conducted at several locations throughout the world. Granular activated carbon is reactivated for environmental and economic reasons to destroy hazardous adsorbed organic compounds and also to conserve 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 RCRA hazardous and non-hazardous material. The Company will arrange transportation for smaller volumes of activated carbon in DOT approved containers and small returnable equipment through a network of less-than-truckload carriers.

Purification services provided by the Company are used to improve the quality of water, food, chemical, pharmaceutical and petrochemical products. These services may be utilized in permanent installations or in temporary applications, such as pilot studies for new manufacturing processes or recovery of off-specification products.

Sales from continuing operations for the Activated Carbon and Service segment were $342.3 million, $295.6 million, and $265.3 million for the years ended December 31, 2008, 2007, and 2006, respectively.

Equipment. Along with providing activated carbons, the Company has developed a complete line of standardized, pre-engineered, adsorption systems – capable of treating liquid flows from 1 gpm to 1,400 gpm – which can be quickly delivered and easily installed at treatment sites. These self-contained adsorption systems are used for vapor phase applications such as volatile organic compound (VOC) control, air stripper off-gases, and landfill gas emissions. Liquid phase equipment systems are used for applications of process purification, wastewater treatment, groundwater remediation and de-chlorination. The Company also custom designs systems to solve unique treatment challenges, providing equipment for activated carbon, ion exchange resins or ultraviolet (UV) technologies each of which can be used for the purification, separation and concentration of liquids or gases.

More than 20 years ago, 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 (refer to Note 17). 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 is a leader in the marketplace for innovative UV technologies with the Sentinel® line designed to protect municipal drinking water supplies from pathogens, the C3 Series™ open-channel wastewater disinfection product line for municipal wastewater disinfection, and Rayox® UV advanced oxidation equipment for treatment of contaminants such as 1,4-Dioxane, MTBE, and Vinyl Chloride in groundwater, process water and industrial wastewater.

The Company also produces a wide range of odor control equipment which typically utilizes catalytic, activated carbon to control odors at municipal wastewater treatment facilities and pumping stations.

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

The proprietary ISEP® (Ionic Separator) continuous ion exchange units are used for the purification and recovery of many products in the food, pharmaceutical, and biotechnology industries. These ISEP® Continuous Separator units perform ion exchange separations using countercurrent processing. The ISEP® and CSEP® (chromatographic separator) systems are currently used at over 300 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.

Sales from continuing operations for the Equipment segment were $47.3 million, $41.3 million, and $37.9 million for the years ended December 31, 2008, 2007, and 2006, 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 and specialty markets.

Activated carbon and carbon cloth are used as the primary raw material in the Company's consumer home products group. The Company currently has two primary product lines that it markets to the retail channel. The first product line, PreZerve® storage products, uses carbon cloth to protect and preserve jewelry and keepsakes from deterioration. The PreZerve® line currently offers over 40 different items. The second product line, AllGone®, is an odor elimination system that utilizes activated carbon discs to adsorb odors and impurities from the air safely and naturally.

Sales from continuing operations for the Consumer segment were $10.7 million, $14.2 million, and $13.0 million for the years ended December 31, 2008, 2007, and 2006, respectively.

For further information, see Note 19 to the Financial Statements.

Markets:

The Company participates in six primary areas: Potable Water, Industrial Process, Environmental Water, Environmental Air, Food, and Specialty Markets. Potable Water applications include municipal drinking water purification as well as point of entry and point of use devices. Applications in the Industrial Process Market includes catalysis, product recovery and purification of chemicals, and pharmaceuticals as well as process water treatment. Remediation of water and VOC removal from vapor are the major sub segments for the two Environmental markets. Food applications include brewing, bottling and sweetener purification. Medical, personal protection, cigarette, automotive, consumer and precious metals applications comprise the Specialty Market.

Potable Water Market. The Company sells activated carbons, equipment, services, ion exchange technology, and UV technologies to municipalities for the treatment of potable water to remove pesticides and other dissolved organic and inorganic material to meet or exceed current state or federal regulations and to remove tastes and odors to make the water acceptable to the public. The Company also sells to OEM manufacturers of home water purification systems. Granular and powdered activated carbon products are sold in this market and in many cases the granular carbon functions both as the primary filtration media as well as an adsorption media to remove the 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 oxidation and disinfection systems are sold for the destruction or inactivation of waterborne contaminants and organisms.

Industrial Process Market. The Company's products used in industrial processing are used either for purification, separation or concentration of customers' products in the manufacturing process or for direct incorporation into the customers' products. The Company sells a wide range of activated carbons and reactivation services to the chemical, petroleum refining, and process industries for the purification of organic and inorganic chemicals, amine, soda ash, antibiotics and vitamins. Activated carbon products and services are also used to decolorize chemicals such as hydrochloric acid and remove pollutants from wastewater. Further, activated carbon is used in treatment of natural gas, flue gas and other vapor streams for removal of carbon dioxide, acetylene, hydrogen, sulfur and mercury compounds. The liquefied natural gas industry uses activated carbons to remove mercury compounds which would otherwise corrode process equipment. Activated carbons are also sold for gasoline vapor recovery equipment.

Environmental Water and Air Markets. Providing products used for the cleanup of contaminated groundwater, surface impoundments and accidental spills comprises the significant need in this market. The Company provides carbon, services and carbon equipment for these applications as well as emergency and temporary cleanup services for public and private entities, utilizing both activated carbon adsorption and UV oxidation technologies.

The Company offers its products and services to private industry to meet stringent environmental requirements imposed by various government entities. The Company's reactivation/recycle service is an especially important element if the customer has contaminants which are hazardous organic chemicals. The hazardous organic chemicals which are adsorbed by the activated carbons are decomposed at the high temperatures of the reactivation furnace and thereby removed from the environment. Reactivation saves the environment as well as eliminating the customers' expense and difficulty in securing long-term containment (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. Reduction of mercury emissions from coal-fired power plants is a growing market for the Company. The re-start of B-line at its Catlettsburg, Kentucky plant to produce up to 70 million pounds of FLUEPAC® powdered activated carbon represents major progress in a multi-step program that would enable the Company to provide a substantial amount of powdered activated carbon to coal-fired power plants.

Municipal sewage treatment plants purchase the Company's odor control systems and activated carbon products to remove objectionable odors emanating from operational facilities and to treat the wastewater to meet discharge requirements. Granular activated carbon is used as a filtration/adsorption medium and the powdered activated carbons are used to enhance the performance of existing biological waste treatment processes.

The Company's UV oxidation systems offer an ideal solution for groundwater remediation and the treatment of process water and industrial wastewater. The Company's Rayox® System is an industry staple for the destruction of organic compounds in groundwater. Rayox® is also used as a process water and wastewater treatment option for the removal of alcohol, phenol, acetone, TOC and COD/BOD.

Food Market. Sweetener manufacturers are the principal purchasers of the Company's products in the food industry. As a major supplier, 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 and high fructose corn syrup.

Specialty Market. The Company is a major supplier of activated carbon to manufacturers of gas masks supplied to 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 military equipment, indoor air quality and air containment in incineration and nuclear applications are also serviced.

Other specialty applications using activated carbons include precious metals producers to recover gold and silver from low-grade ore, and cigarette manufacturers in charcoal filters. The Company's activated carbon cloth product is used in medical and other specialty applications.

Sales and Marketing:

The Company has a direct sales force in the United States with offices located in Pittsburgh, Pennsylvania; Santa Fe Springs, California; and Marlton, New Jersey. The Company conducts activated carbon related sales in Canada and in Latin America through agent/distributor relationships and maintains offices in Sao Paulo, Brazil and Mexico City, Mexico. In the Asia Pacific Region, the Company maintains offices in Singapore; Beijing and Shanghai, China; Taipei, Taiwan; and Tokyo, Japan (a joint venture relationship) through agents and distributors to manage sales.

In Europe, the Company has sales offices in Feluy, Belgium; Ashton-in-Makerfield, United Kingdom; Houghton le-Spring, United Kingdom; and Beverungen, Germany. The Company also has a network of agents and distributors that conduct sales in certain countries in Europe, the Middle East and Africa.

All offices can play a role in sales of products or services from any of the Company's segments.

Geographic sales information can be found in Note 19 to the Financial Statements. 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 from continuing operations of $22.3 million and $11.8 million as of January 31, 2009 and 2008, respectively, in the Equipment segment. The Company expects to carry less than one-third of the 2009 balance into 2010.

Competition:

The Company is a major global presence with several competitors in the worldwide market with respect to the production and sale of activated carbon-related products: Norit, N.V., a Dutch company, Mead/Westvaco Corporation, a United States company and Siemens Water Technologies, a division of Siemens AG, Erlangen, Germany, 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.

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

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 Wedeco Ideal Horizons, a German company owned by ITT Industries, a United States company.

Raw Materials:

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

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 purchases hydrogen peroxide via an annual supply contract for its UV technologies business.

The only other raw material that is purchased by the Company in significant quantities is pitch, which is used as a binder in the carbon manufacturing process. The Company purchases pitch from various suppliers in the United States and China under annual supply contracts and spot purchases.

The purchase of key equipment components is coordinated through agreements with various suppliers.

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

Research and Development:

The Company's primary research and development activities are conducted at a research center in Pittsburgh, Pennsylvania. This 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. Facilities in Ashton-in-Makerfield, United Kingdom supplement the work performed in Pittsburgh.

The principal goals of the Company'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.

The Company's research programs include new and improved methods for manufacturing and utilizing new and enhanced activated carbons. The Company has commercial sales of four new products for mercury removal from flue gas. Other carbons with improved performance for high sulfur oxide applications are under development. The Company continues to expand its UV product line with innovative products targeted at emerging markets. Designs of two new Sentinel® reactors were completed in 2008. Both reactors are designed to disinfect drinking water as well as to oxidize organic contaminants. The Company also completed the engineering and manufacture of its new C3 Series™ water reuse system. The system utilizes cutting edge flow distribution technology to improve the efficiency of water treatment.

Research and development expenses were $4.1 million, $3.7 million, and $4.2 million in 2008, 2007 and 2006, respectively.

Patents and Trade Secrets:

The Company possesses a substantial body of technical knowledge and trade secrets and owns 72 United States patent applications and/or patents as well as 267 patent applications and/or patents in other countries. The issued United States and foreign patents expire in various years from 2009 through 2031.

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:

USA. By letter dated January 22, 2007, the Company received from the United States Environmental Protection Agency, Region 4 (“EPA”) a report of a hazardous waste facility inspection performed by the EPA and the Kentucky Department of Environmental Protection (“KYDEP”) as part of a Multi Media Compliance Evaluation of the Company’s Big Sandy Plant in Catlettsburg, Kentucky that was conducted on September 20 and 21, 2005. Accompanying the report was a Notice of Violation (“NOV”) alleging multiple violations of the Federal Resource Conservation and Recovery Act (“RCRA”) and corresponding EPA and KYDEP hazardous waste regulations. The alleged violations mainly concern the hazardous waste spent activated carbon regeneration facility. The Company met with the EPA on April 17, 2007 to discuss the inspection report and alleged violations, and submitted written responses in May and June 2007. In August 2007, the EPA notified the Company that it believes there were still significant violations of RCRA that are unresolved by the information in the Company’s responses, without specifying the particular violations. During a meeting with the EPA on December 10, 2007, the EPA indicated that the agency would not pursue certain other alleged violations. Based on discussions during the December 10, 2007 meeting, subsequent communications with EPA, and in connection with the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”) Notice referred to below, the Company has taken actions to address and remediate a number of the unresolved alleged violations. The Company believes that the number of unresolved issues as to alleged continuing violations cited in the January 22, 2007 NOV has been reduced substantially. The EPA can take formal enforcement action to require the Company to remediate any or all of the unresolved alleged continuing violations which could require the Company to incur substantial additional costs. The EPA can also take formal enforcement action to impose substantial civil penalties with respect to violations cited in the NOV, including those which have been admitted or resolved. The Company is awaiting further response from the EPA and cannot predict with any certainty the probable outcome of this matter or range of potential loss, if any.

On July 3, 2008, the EPA verbally informed the Company that there are a number of unresolved RCRA violations at the Big Sandy Plant which may render the facility unacceptable to receive spent carbon for reactivation from sites regulated under the CERCLA pursuant to the CERCLA Off-Site Rule. The Company received written notice of the unacceptability determination on July 14, 2008 (the "Notice"). The Notice alleges multiple violations of RCRA and four releases of hazardous waste. The alleged violations and releases stem from the September 2005 multi-media compliance inspections, and are among those alleged in the January 2007 NOV described in the preceding paragraph. The Company originally had until September 1, 2008 to demonstrate to the EPA that the alleged violations and releases are not continuing, or else the Big Sandy Plant will not be able to receive spent carbon from CERCLA sites until the EPA determines that the facility is again acceptable to receive such CERCLA wastes. The Company met with the EPA on August 25, 2008 and the Company submitted a written response to the Notice prior to the meeting.

By letter dated August 18, 2008, the Company was notified by the EPA Suspension and Debarment Division ("SDD") that because of the alleged violations described in the CERCLA Notice, the SDD was making an assessment of the Company's present responsibility to conduct business with Federal Executive Agencies. Representatives of the SDD attended the August 25, 2008 EPA meeting. On August 28, 2008, the Company received a letter from the Division requesting additional information from the Company in connection with the SDD's evaluation of the Company's potential "business risk to the Federal Government," noting that the Company engages in procurement transactions with or funded by the Federal Government. The Company provided the SDD with all information requested by the letter in September 2008. The SDD can suspend or debar a Company from sales to the federal government directly or indirectly through government contractors or with respect to projects funded by the federal government. In October 2008, the SDD indicated that it was still reviewing the matter but that another meeting with the Company was not warranted at the time. The Company believes that there is no basis for suspension or debarment on the basis of the matters asserted by the EPA in the Notice or otherwise.

By letter dated February 13, 2009, the EPA informed the Company that, based on information submitted by the Company indicating that the Big Sandy Plant has returned to physical compliance for the alleged violations and releases, the EPA has made an affirmative determination of acceptability for receipt of CERCLA wastes at the Big Sandy Plant. The EPA's determination is conditioned upon the Company treating certain residues resulting from the treatment of the carbon reactivation furnace off-gas as hazardous waste and not sending material dredged from the onsite wastewater treatment lagoons offsite other than to a permitted hazardous waste treatment, storage or disposal facility. The Company has requested clarification from the EPA regarding the conditions. The Company is also in discussions with the EPA and KYDEP regarding the classification of these materials. If the Company is required to treat and/or dispose of the material dredged from the lagoon as hazardous waste, the costs for doing so could be substantial.

In June 2007, the Company received a Notice Letter from the New York State Department of Environmental Conservation ("NYSDEC") stating that the NYSDEC had determined that the Company is a Potentially Responsible Party ("PRP") at the Frontier Chemical Processing Royal Avenue Site in Niagara Falls, New York (the "Site"). The Notice Letter requests that the Company and other PRPs develop, implement and finance a remedial program for Operable Unit #1 at the Site. Operable Unit #1 consists of overburden soils and overburden and upper bedrock groundwater. The selected remedy is removal of above grade structures and contaminated soil source areas, installation of a cover system, and ground water control and treatment, estimated to cost between approximately $11 million and $14 million, which would be shared among the PRPs. The Company has not determined what portion of the costs associated with the remedial program it would be obligated to bear and the Company cannot predict with any certainty the outcome of this matter or range of potential loss. The Company has joined a PRP group and has executed a Joint Defense Agreement with the group members. In August 2008, the Company and over 100 PRP's entered into a Consent Order with the NYSDEC for additional site investigation directed toward characterization of the Site to better define the scope of the remedial project. The Company contributed monies to the PRP group to help fund the work required under the Consent Order. The field work was initiated in 2008 but suspended due the onset of winter. The group plans to complete the work in the spring of 2009.

By letter dated July 3, 2007, the Company received an NOV from the KYDEP alleging that the Company has violated the KYDEP's hazardous waste management regulations in connection with the Company's hazardous waste spent activated carbon regeneration facility located at the Big Sandy Plant in Catlettsburg, Kentucky. The NOV alleges that the Company has failed to correct deficiencies identified by the KYDEP in the Company's Part B hazardous waste management facility permit application and related documents and directed the Company to submit a complete and accurate Part B application and related documents and to respond to the KYDEP's comments which were appended to the NOV. The Company submitted a response to the NOV and the KYDEP's comments in December 2007 by providing a complete revised permit application. The KYDEP has not indicated whether or not it will take formal enforcement action, and has not specified a monetary amount of civil penalties it might pursue in any such action, if any. KYDEP can also deny the Part B operating permit. On October 18, 2007, the Company received an NOV from the EPA related to this permit application and submitted a revised application to both the KYDEP and the EPA within the mandated timeframe. The EPA has not indicated whether or not it will take formal enforcement action, and has not specified a monetary amount of civil penalties it might pursue in any such action. The EPA can also deny the Part B operating permit. At this time the Company cannot predict with any certainty the outcome of this matter or range of loss, if any.

In conjunction with the February 2004 purchase of substantially all of Waterlink's operating assets and the stock of Waterlink's U.K. subsidiary, several environmental studies were performed on Waterlink's Columbus, Ohio property by environmental consulting firms which identified and characterized areas of contamination. In addition, these firms identified alternative methods of remediating the property, identified feasible alternatives and prepared cost evaluations of the various alternatives. The Company concluded from the information in the studies that a loss at this property is probable and recorded the liability as a component of noncurrent other liabilities in the Company's consolidated balance sheet. At December 31, 2008, the balance recorded was $4.0 million. Liability estimates are based on an evaluation of, among other factors, currently available facts, existing technology, presently enacted laws and regulations, and the remediation experience of other companies. The Company has not incurred any environmental remediation expense for the years ended December 31, 2008 and 2007, but incurred $0.1 million of expense in 2006. It is reasonably possible that a change in the estimate of this obligation will occur as remediation preparation and remediation activity commences in the future. The ultimate remediation costs are dependent upon, among other things, the requirements of any state or federal environmental agencies, the remediation methods employed, the final scope of work being determined, and the extent and types of contamination which will not be fully determined until experience is gained through remediation and related activities. The accrued amounts are expected to be paid out over the course of several years once work has commenced. The Company has yet to make a determination as to when it will proceed with remediation efforts.

Europe. The Company is also subject to various environmental health and safety laws and regulations at its facilities in Belgium, Germany and the United Kingdom. These laws and regulations address substantially the same issues as those applicable to the Company in the United States. The Company believes it is presently in substantial compliance with these laws and regulations.

Indemnification. The Company has a limited indemnification agreement with the previous owner of the Company which will fund certain environmental costs if they are incurred at the Company's Catlettsburg, Kentucky plant. The Company believes that the amount of the indemnification is sufficient to fund these liabilities if they arise.

Employee Relations:

As of December 31, 2008, the Company employed 943 persons on a full-time basis, 684 of whom were salaried and non-union hourly production, office, supervisory and sales personnel. The United Steelworkers represent 227 hourly personnel in the United States. The current contracts with the United Steelworkers expire on April 1, 2009 at the Catlettsburg, Kentucky facility, February 15, 2010 at the Columbus, Ohio facility and July 1, 2011 at the Pittsburgh, PA location. The 32 hourly personnel at the Company's Belgian facility are represented by two national labor organizations with contracts expiring on July 31, 2009. The Company also has hourly employees at three non-union United Kingdom facilities, two non-union United States facility one each located in California and Mississippi, and at two non-union China facilities.

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 shareholder who requests it by contacting the Secretary of the Company at 400 Calgon Carbon Drive, Pittsburgh, PA 15205.

- Corporate Governance Guidelines
- Audit Committee Charter
- Compensation Committee Charter
- Corporate Governance Committee Charter
- Code of Business Conduct and Ethics
- Code of Ethical Business Conduct Supplement for Chief Executive and Senior Financial Officers
- Director Orientation and Continuing Education Policy

- Executive Committee Charter

Item 1A. Risk Factors:

Risks relating to our business

Our pension plans are currently underfunded, and we expect to be subject to significant 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 $4.1 million and $5.4 million to our U.S. Pension plans and $2.1 million and $2.4 million to our European pension plans in 2008 and 2007, respectively. We currently expect to contribute approximately $1.1 million to our U.S. pension plans to meet minimum funding requirements and $1.7 million to our European pension plans in 2009. The current economic environment is negatively impacting 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, investment rates, 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 730 of the Internal Revenue Code, as added by the Pension Protection Act of 2006 for minimum funding requirements, would increase our minimum required contributions to our U.S. pension plans by approximately $1.5 million to $2.1 million over the next three years.

Our pension plans in the aggregate are underfunded by approximately $48 million as of December 31, 2008 (based on the actuarial assumptions used for SFAS No. 87, “Employers’ Accounting for Pensions,” 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 $34 million as of December 31, 2008, 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. See Note 12 to our consolidated financial statements contained in Item 8 of this Annual Report.

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 granular activated carbon production process. We estimate that coal will represent approximately 60% of our carbon product costs in 2009. We have various annual and multi-year contracts in place for the supply of coal that expire at various intervals from 2008 to 2011. Interruptions in coal supply caused by mine accidents, labor disputes, transportation delays, breach of supplier contractual obligations, or other events for other than a temporary period could have an adverse effect on our ability to meet customer demand. 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. During 2008, our aggregate costs for coal increased by $2.6 million, or 16.2%, compared to 2007. Based upon the estimated usage of coal in 2009, a hypothetical 10% increase in the price of coal would result in $1.9 million of additional pre-tax expenses to us. We may not be able to pass through raw material price increases to our customers.

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

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 manufacturing process and have annual and multi-year contracts for the supply of natural gas at each of our major facilities. If shortages of, or restrictions on the delivery of natural gas occur, production at our activated carbon 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. For example, natural gas prices have increased significantly in recent years. We may not be able to pass through natural gas and other fuel price increases to our customers.

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 (the "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.

In March 2007, the International Trade Commission (the "ITC") determined that these unfairly priced steam activated carbon imports from China caused material injury to the U.S. activated carbon industry. This affirmative decision by the ITC triggered the imposition of significant anti-dumping duties in the form of cash deposits, ranging from 62% to 228%. The anti-dumping duties will be imposed for at least five years but are subject to periodic review within that time frame. The first review period began April 2008 with subsequent opportunities for review every April with respect to the twelve months then completed. A preliminary determination is due no later than March 31, 2009. The significant anti-dumping duties imposed by the DOC and the affirmative decision by the 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 reduced or eliminated in the future, which could adversely affect demand or pricing for our product.

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 of our production facilities covering approximately 27% of our full-time workforce as of December 31, 2008. Those collective bargaining agreements expire from 2009 through 2011. 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.

Our business is subject to a number of global economic risks

As widely reported, financial markets in the United States, Europe and Asia have been experiencing extreme disruption, including, among other things, extreme volatility in security prices, severely diminished liquidity and credit availability, rating downgrades of certain investments and declining valuations of others. Governments have taken unprecedented actions intending to address extreme market conditions that include severely 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.

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 2008 net sales, approximately 45% were sales to countries other than the United States, and 2008 net sales denominated in non-U.S. dollars represented approximately 34% 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 only production facilities for virgin granular activated carbon are in the United States and China. Those production facilities are used in supplying our global demand for virgin granular activated carbon. All of our foreign operations purchase from the U.S. and China operations in U.S. dollars yet sell in local currency, resulting in foreign 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 business includes capital equipment sales which could have extreme fluctuations due to the cyclical nature of that type of business.

Our Equipment segment represented approximately 12% of our 2008 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.

We could find it difficult to fund the capital needed to complete our growth strategy due to borrowing restrictions under our current credit facility.

Our current credit facility requires compliance with various affirmative and negative covenants, including limitations with respect to our ability to pay dividends, make loans, incur indebtedness, grant liens on our property, engage in certain mergers and acquisitions, dispose of assets and engage in certain transactions with our affiliates. Borrowing availability under our current credit facility is based on the value, from time to time, of certain of our accounts receivable, inventory, and equipment. As a result, these restrictions may prevent us from being able to borrow sufficient funds under our current credit facility to meet our future capital needs, and alternate financing on terms acceptable to us may not be available.

If our liquidity would remain constrained for more than a temporary period, we may need to either delay certain strategic growth projects or access higher cost capital markets in order to fund our projects, which may adversely affect our financial results.

Our required capital expenditures may exceed our estimates.

Our capital expenditures were $34.9 million in 2008, including approximately $13.0 million related to the planned re-start of a currently idled production line. 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 these capital investments. If we are unable to do so, we may not be able to effectively compete.

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, 2008, we had consolidated goodwill of approximately $26.3 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. For the year ended December 31, 2006, we recorded a $6.9 million impairment charge associated with our UV equipment reporting unit, principally as a result of the fourth quarter decision by the Federal Court of Canada, which found that our patent for the use of UV light to prevent infection from Cryptosporidium in drinking water is invalid. As a result, our estimate of future royalty income used in determining the fair value of the reporting unit declined substantially from the prior year. 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.

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. 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, stricter regulations surrounding the treatment of Cryptosporidium and other disease causing microorganisms in drinking water, as addressed by the EPA’s promulgation of the Long Term 2 Enhanced Surface Water Treatment Rule (“LT2”), were expected to be effective as of the fourth quarter of 2004. LT2 was not ultimately published in the Federal Register until January 2006, thus delaying municipalities’ requirements for testing and any subsequent need to fund a plan for remediation by over a year. The effect has been a delay in the timing of the expected growth for our UV equipment business.

The Company had expected increased demand for powdered activated carbon products beginning in 2009 largely driven by the EPA's Clean Air Mercury Rule, which established an emissions trading system to reduce mercury emissions from coal-fired power plants by approximately 70% over a 10 year period. On February 8, 2008, the United States Circuit Court of Appeals for the District of Columbia vacated the Clean Air Mercury Rule. Additional appeals, litigation, and regulatory proceedings could defer implementation of another EPA mercury reduction regulation for years or indefinitely. Even if adoption of a new Clean Air Mercury Rule is delayed indefinitely by the legal legislative and regulatory process, existing federal and state laws and regulations, as well as state or federal legislation introduced in response to the Court of Appeals decision and new litigation, could result in substantially more stringent regulation, resulting in higher-than expected demand for the Company's products. 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.

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 business faces significant competition principally from Norit N.V., Mead/Westvaco Corporation and Siemens Water Technologies, as well as European and Chinese activated carbon producers and East Asian producers of coconut-based activated carbon. Our UV technology products face significant competition from principally Trojan Technologies, Inc., which is owned by Danaher Corporation, and Wedeco Ideal Horizons, which is owned by ITT Industries. 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.

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.

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.

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 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 or other natural disaster, or as a result of fire, explosions, war, terrorist activities, political conflict or other hostilities, 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 business conditions could result in impairment charges that could have an adverse impact on our financial results.

An example of an unplanned shutdown of one of our production facilities was the shutdown of our Pearl River facility in Pearlington, Mississippi due to damage caused by Hurricane Katrina in August 2005. The plant did not become operational again until November 2005 and was not operating again at full capacity until January 2006. Certain customer shipments were either delayed or cancelled during the plant outage, the consequences of which adversely affected us during 2006. We estimated our pre-tax business interruption losses during 2005 and 2006 to be approximately $4.4 million in the aggregate due to the effect of the unplanned shutdown of the Pearl River facility.

We hold a variety of patents that give us a competitive advantage in certain markets. An inability to defend those patents from competitive attack could have an adverse effect on both current results and future growth targets.

From time to time in the course of our business, we have to address competitive challenges to our patented technology. Following protracted litigation in multiple jurisdictions, the U.S. Court of Appeals for the Federal Circuit held that our process patents for the use of ultraviolet light to prevent infection from Cryptosporidium and Giardia in drinking water (the “UV patents”) are invalid in the United States. On March 3, 2008, the Supreme Court of Canada held that our Canadian UV patents are invalid, thereby concluding this case. We did not appeal the ruling in the United States. A German trial court has found that a competitor infringed our UV patents with respect to medium pressure ultraviolet light, but did not infringe with respect to low pressure ultraviolet light. The Company appealed the decision relating to low pressure ultraviolet light. The competitor did not appeal. The validity of the German UV patents, as distinguished from issues of infringement which were decided in the trial court, is the subject of administrative proceedings in Germany. The outcome of these cases has impaired the Company’s ability to capitalize on substantial future revenues from the licensing of its UV patents.

With the exception of 2008 and 2007, we have incurred significant legal fees and expenses in recent years litigating these matters. For example, legal expenses related to these patent litigation matters totaled approximately $4.7 million in 2006. We may be required to incur additional significant legal expenses to defend our intellectual property in the future.

Furthermore, these legal disputes over our UV patents may adversely affect our business and growth prospects because they may suppress overall demand for UV equipment as municipalities may decide to wait for the completion of the litigation to resolve the resulting uncertainties before making investment decisions.

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 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.

Environmental compliance and remediation 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. For example, the Company received Notices of Violations (“NOVs”) from the U.S. EPA in January 2007, October 2007, and June 2008 and from the Kentucky Department of Environmental Protection in July 2007. While the Company is attempting to resolve these matters, an unfavorable result could have a significant adverse impact on its results of operations and cash flows. If we receive similar demands in the future, we may incur significant costs in connection with the resolution of those matters. Refer to Regulatory Matters within Item 1, Business for a more detailed discussion.

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, 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 88% of our sales in 2008 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.

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

Although a portion of our international business is currently in regions where the risk level and established legal systems in many cases are similar to that in the United States, we also conduct business in developing countries, and we are focusing on increasing our sales in regions such as South America, Southeast Asia, India 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"); however, there can be no assurances that our employees will adhere to our code of business conduct, other Company policies or the FCPA. If we fail to enforce our policies and procedures properly or maintain internal accounting practices to accurately record our international transactions, we may be subject to regulatory sanctions. We could incur significant costs for investigation, litigation, fees, settlements and judgments for potential violations of the FCPA or other laws or regulations which, in turn, could negatively affect our results of operations.

Our ability to utilize our foreign tax credits and net operating losses may be limited.

As of December 31, 2008, we had net operating loss carryforwards ("NOLs") of approximately $52.5 million for state income tax purposes. Under Section 382 of the Internal Revenue Code, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change NOLs and other pre-change tax attributes to offset its post-change income may be limited. An ownership change is generally defined as a greater than 50% change in its equity ownership by value over a three-year period. We could experience an ownership change in the future as a result of changes in our stock ownership. If we were to trigger an ownership change in the future, our ability to use any NOLs existing at that time could be limited.

At December 31, 2008, we had $12.2 million of foreign tax credit carryforwards for which we have established a valuation reserve of $7.9 million. If some or all of these tax credits expire, they will not be available to offset our tax liability.

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

Our stockholder rights plan and 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:

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

Item 1b. Unresolved Staff Comments:

None.

Item 2. Properties:

The Company owns nine 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; Feluy, Belgium; Grays, United Kingdom; and Datong, China. The Company leases one production facility in each of the following locations: Coraopolis, Pennsylvania; Houghton le-Spring, United Kingdom; Ashton-in-Makerfield, United Kingdom; and Tianjin, China. The Company's 49% owned joint venture, Calgon Mitsubishi Chemical Corporation, owns one facility in Fukui, Fukui Prefecture, Japan. The Company owns two warehouses, one of which is in Pittsburgh, Pennsylvania and the other is in La Louviere, Belgium. The Company also leases thirty-two warehouses, service centers, and sales office facilities. Of these, twenty-three are located in the United States, four in China, and one each in the United Kingdom, Germany, Canada, Singapore, and Taiwan. Four of the United States facilities are located in Pittsburgh, Pennsylvania and one each in the following locations: Downingtown, Pennsylvania; Johnston, Rhode Island; Rockdale, Illinois; Santa Fe Springs, California; Marlton, New Jersey; Stockton, California; Tempe, Arizona; Torrance, California; Ontario, California; Schenley, Pennsylvania; South Point, Ohio; Muncy, Pennsylvania; Steubenville, Ohio; Ironton, Ohio; and Sulphur, Louisiana as well as two each in Houston, Texas and Huntington, West Virginia. The United Kingdom facility is located in Ashton-in-Makerfield. The facility in Germany is located in Beverungen. Two of the China facilities are located in Shanghai and one each in Beijing and Tianjin. The Taiwan facility is located in Taipei. The Canadian facility is located in Richmond Hill, Ontario. The Company's 49% owned joint venture, Calgon Mitsubishi Chemical Corporation, leases four offices, one in each Tokyo and Osaka, and two in Fukuoka Prefecture. The Company's 20% owned joint venture, Calgon Carbon (Thailand) Company 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 four-acre site and serves 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 produce coal-based or coconut-based specialty activated carbons.

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 plant occupies approximately 27 acres in Columbus, Ohio. 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 Blue Lake plant, located near the city of Eureka, California, occupies approximately two acres. The plant was previously idled and start-up began in November 2008. The primary operation at the plant includes the reactivation of spent granular activated carbons 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 the Equipment and Activated Carbon and Service segments, manufactures and assembles fully engineered carbon equipment for purification, concentration and separation systems. This plant also serves as the east coast staging and refurbishment point for carbon service equipment.

The Coraopolis, Pennsylvania Engineered Solutions plant is a 44,000 square foot production facility located near Pittsburgh, Pennsylvania. The primary focus of this facility is the manufacture of UV and Ion Exchange (ISEP®) 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 ISEP® systems.

The Feluy plant occupies a site of approximately 21 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 is 49% owned by Calgon Carbon as part of a joint venture with Mitsubishi Chemical Company. The joint venture is Calgon Mitsubishi Chemical Corporation. The plant, which serves the Activated Carbon and Service segment, occupies a site of approximately six acres and has one production line for carbon reactivation.

The Datong, China plant occupies 15,000 square meters. This plant produces agglomerated activated carbon intermediate product for the Activated Carbon and Service segment for use in both the potable and industrial markets.

The Tianjin, China plant is licensed to export activated carbon products. It occupies approximately 35,000 square meters. This plant finishes, sizes, tests, and packages activated carbon products for the Activated Carbon and Service segment for distribution both inside China and for export.

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

Item 3. Legal Proceedings:

On March 20, 2007, the Company and ADA-ES entered into a Memorandum of Understanding ("MOU") providing for cooperation between the companies to attempt to jointly market powdered activated carbon ("PAC") to the electric power industry for the removal of mercury from coal fired power plant flue gas. The MOU provided for commissions to be paid to ADA-ES in respect of product sales. The Company terminated the MOU effective as of August 24, 2007 for convenience. Neither party had entered into sales or supply agreements with prospective customers as of that date. On March 3, 2008, the Company entered into a supply agreement with a major U.S. power generator for the sale of powdered activated carbon products with a minimum purchase obligation of approximately $55 million over a 5 year period. ADA-ES claimed that it is entitled to commissions of an amount of at least $8.25 million over the course of the
5 year contract, which the Company denies. On September 29, 2008, the Company filed suit in the United States District Court for the Western District of Pennsylvania for a declaratory judgment from the Court that the Company has no obligation to pay ADA-ES commissions related to this contract or for any future sales made after August 24, 2007.

Following protracted litigation in multiple jurisdictions, the U.S. Court of Appeals for the Federal Circuit held that the Company's process patents for the use of ultraviolet light to prevent infection from Cryptosporidium and Giardia in drinking water (the "UV patents") are invalid in the United States concluding the U.S. litigation relating to the UV patents. On March 3, 2008, the Supreme Court of Canada held that the Company's Canadian UV patents are invalid concluding the Canadian UV patent litigation. In March 2007, the Company and Trojan entered into a settlement whereby in exchange for a nominal cash payment and relief from legal fees, the Company granted Trojan Technologies, Inc. worldwide immunity from all current and future legal action related to the Company's UV patents. In 2007, a German trial court found that a competitor infringed the Company's UV patents with respect to medium pressure ultraviolet light, but did not infringe with respect to low pressure ultraviolet light. The Company appealed the decision relating to low pressure light. The competitor did not appeal. By order dated September 29, 2008, each party nominated an expert to provide opinions as to questions posed by the Court. The Court will then choose one of the experts nominated or choose another expert. The validity of the German UV patents, as distinguished from issues of infringement which were decided in the trial court, is the subject of pending administrative proceedings in Germany. The outcome of these cases has impaired the Company's ability to capitalize on substantial future revenues from the licensing of its UV patents.

In addition to the matters described above, the Company is involved in various other 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. Management believes that the ultimate liabilities, if any, resulting from such lawsuits and claims will not materially affect the consolidated financial position or liquidity of the Company, but an adverse outcome could be material to the results of operations in a particular period in which a liability is recognized.

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

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

PART II

Item 5. Market for Registrant's Common Equity, Related Shareholder 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 1,325 registered shareholders at December 31, 2008.

Quarterly Common Stock Price Ranges and Dividends