

AIR PRODUCTS & CHEMICALS INC /DE/  
Form 10-K  
November 26, 2013  
Table of Contents

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

**FORM 10-K**

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended  
30 September 2013

OR

.. TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934 For the transition  
period from \_\_\_\_\_ to \_\_\_\_\_  
Commission file number 1-4534

**AIR PRODUCTS AND CHEMICALS, INC.**

7201 Hamilton Boulevard  
Allentown, Pennsylvania, 18195-1501  
Tel. (610) 481-4911

State of incorporation: Delaware  
I.R.S. identification number: 23-1274455

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

Title of Each Class:  
Common Stock, par value \$1.00 per share  
Preferred Stock Purchase Rights

Registered on:  
New York  
New York

Securities registered pursuant to Section 12(g) of the Act: None

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

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

# Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

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

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

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

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

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

The aggregate market value of the voting stock held by non-affiliates of the registrant on 31 March 2013 was approximately \$18.1 billion. For purposes of the foregoing calculations all directors and/or executive officers have been deemed to be affiliates, but the registrant disclaims that any such director and/or executive officer is an affiliate.

The number of shares of common stock outstanding as of 31 October 2013 was 211,275,654.

## DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014 are incorporated by reference into Part III.

**Table of Contents**

**AIR PRODUCTS AND CHEMICALS, INC.**

**ANNUAL REPORT ON FORM 10-K**

**For the fiscal year ended 30 September 2013**

**TABLE OF CONTENTS**

ITEM 1.	<u>BUSINESS</u>	3
ITEM 1A.	<u>RISK FACTORS</u>	9
ITEM 1B.	<u>UNRESOLVED STAFF COMMENTS</u>	13
ITEM 2.	<u>PROPERTIES</u>	13
ITEM 3.	<u>LEGAL PROCEEDINGS</u>	14
ITEM 4.	<u>NOT APPLICABLE</u>	15
ITEM 5.	<u>MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES</u>	15
ITEM 6.	<u>SELECTED FINANCIAL DATA</u>	17
ITEM 7.	<u>MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	18
ITEM 7A.	<u>QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	43
ITEM 8.	<u>FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA</u>	45
ITEM 9.	<u>CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE</u>	99
ITEM 9A.	<u>CONTROLS AND PROCEDURES</u>	99
ITEM 9B.	<u>OTHER INFORMATION</u>	99
ITEM 10.	<u>DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE</u>	100
ITEM 11.	<u>EXECUTIVE COMPENSATION</u>	100
ITEM 12.	<u>SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS</u>	100
ITEM 13.	<u>CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE</u>	101
ITEM 14.	<u>PRINCIPAL ACCOUNTANT FEES AND SERVICES</u>	101
ITEM 15.	<u>EXHIBITS AND FINANCIAL STATEMENT SCHEDULES</u>	102
	<u>SIGNATURES</u>	103

---

**Table of Contents**

**PART I**

**ITEM 1. BUSINESS**

**General Description of Business**

Air Products and Chemicals, Inc. ( we, our, us, the Company, Air Products, or registrant ), a Delaware corporation originally founded in 1911, serves energy, electronics, chemicals, metals, and manufacturing customers globally with a unique portfolio of products, services, and solutions that include atmospheric gases, process and specialty gases, performance materials, equipment, and services. The Company is the world's largest supplier of hydrogen and helium and has built leading positions in growth markets such as refinery hydrogen, semiconductor materials, natural gas liquefaction, and advanced coatings and adhesives. As used in this report, unless the context indicates otherwise, the terms we, our, us, the Company, or registrant include controlled subsidiaries and predecessors of Air Products and its subsidiaries.

**Financial Information about Segments**

The Company manages its operations, assesses performance, and reports earnings under four business segments: Merchant Gases, Tonnage Gases, Electronics and Performance Materials, and Equipment and Energy. Financial information concerning the Company's four business segments appears in Note 25, Business Segment and Geographic Information, to the consolidated financial statements, included under Item 8, herein.

**Narrative Description of Business by Segments**

**Merchant Gases**

Merchant Gases sells atmospheric gases, such as oxygen, nitrogen, and argon (primarily recovered by the cryogenic distillation of air); process gases such as hydrogen, helium (purchased or refined from crude helium), and carbon dioxide; specialty gases; temporary gas supply services; and equipment, throughout the world to customers in diversified industries, including metals, glass, electronics, chemical processing, food processing, healthcare, general manufacturing, and petroleum and natural gas industries.

Merchant Gases supplies the following types of products:

**Liquid bulk** Product is delivered in bulk (in liquid or gaseous form) by tanker or tube trailer and stored, usually in its liquid state, in equipment designed and installed by the Company at the customer's site for vaporizing into a gaseous state as needed. Liquid bulk sales are typically governed by three- to five-year contracts.

**Packaged gases** Small quantities of product are delivered in either cylinders or dewars. The Company operates packaged gas businesses in Europe, Asia, and Latin America. In the United States, the Company's packaged gas business sells products only for the electronics and magnetic resonance imaging (principally helium) industries.

**Small on-site plants** Customers receive product through small on-sites (cryogenic or noncryogenic generators), either by a sale of gas contract or the sale of the equipment to the customer.

Electric power is the largest cost component in the production of atmospheric gases—oxygen, nitrogen, and argon. Natural gas is also an energy source at a number of the Company's Merchant Gases facilities. The Company mitigates energy and natural gas price increases through pricing formulas and surcharges. Helium is primarily produced as a by-product of natural gas production. We purchase crude helium for purification and resale. During fiscal year 2013, we experienced shortages in helium supply due to industry-wide sourcing shortfalls. No other significant difficulties were encountered in obtaining adequate supplies of energy or raw materials during the year.

Merchant Gases competes worldwide against three global industrial gas companies: L'Air Liquide S.A.; Linde AG; and Praxair, Inc.; and several regional sellers (including Airgas, Inc., primarily with respect to liquid bulk sales). Competition in industrial gases is based primarily on price, reliability of supply, and the development of industrial gas applications.

Merchant Gases sales constituted 40% of the Company's consolidated sales in fiscal year 2013, 38% in fiscal year 2012, and 38% in fiscal year 2011. Sales of atmospheric gases (oxygen, nitrogen, and argon) constituted approximately 19% of consolidated sales in fiscal year 2013, 21% in

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

fiscal year 2012, and 21% in fiscal year 2011.

The Company owns a 67.2% controlling interest in the outstanding shares of Indura S.A., an industrial gas company in South America which produces packaged and liquid bulk gases and sells related hard goods. Indura S. A. is

---

## **Table of Contents**

accounted for as part of the Merchant Gases operating segment. The Merchant Gases segment also includes the Company's share of the results of several joint ventures accounted for by the equity method. The largest of these joint ventures operate in Mexico, Italy, South Africa, Saudi Arabia, India, and Thailand.

### **Tonnage Gases**

Tonnage Gases provides hydrogen, carbon monoxide, nitrogen, oxygen, and syngas (a hydrogen-carbon monoxide mixture) principally to the energy production and refining, chemical, and metallurgical industries worldwide. Gases are produced at large facilities located adjacent to customers' facilities or by pipeline systems from centrally located production facilities and are generally governed by contracts with 15- to 20-year terms. The Company is the world's largest provider of hydrogen, which is used by oil refiners to facilitate the conversion of heavy crude feedstock and lower the sulfur content of gasoline and diesel fuels to reduce smog and ozone depletion. The energy production industry uses nitrogen injection for enhanced recovery of oil and natural gas and oxygen for gasification. The metallurgical industry uses nitrogen for inerting and oxygen for the manufacture of steel and certain nonferrous metals. The chemical industry uses hydrogen, oxygen, nitrogen, carbon monoxide, and syngas as feedstocks in the production of many basic chemicals. The Company delivers product through pipelines from centrally located facilities in or near the United States Gulf Coast; Los Angeles, California; Alberta, Canada; Rotterdam, the Netherlands; United Kingdom; Western Belgium; Ulsan, Korea; Nanjing, China; Tangshan, China; Kuan Yin, Taiwan; Singapore; and Camaçari, Brazil. The Company also owns less than controlling interests in pipelines located in Thailand and South Africa.

Natural gas is the principal raw material for hydrogen, carbon monoxide, and syngas production. Electric power is the largest cost component in the production of atmospheric gases. The Company mitigates energy and natural gas price increases through long-term cost pass-through contracts. During fiscal year 2013, no significant difficulties were encountered in obtaining adequate supplies of energy or raw materials.

Tonnage Gases competes against three global industrial gas companies: L'Air Liquide S.A.; Linde AG; Praxair, Inc.; and several regional competitors. Competition is based primarily on price, reliability of supply, the development of applications that use industrial gases, and, in some cases, provision of other services or products such as power and steam generation. We also have a competitive advantage in regions where we have pipeline networks, which enable us to provide a reliable and economic supply of products to customers.

Tonnage Gases sales constituted approximately 33% of the Company's consolidated sales in fiscal year 2013, 33% in fiscal year 2012, and 34% in fiscal year 2011. Tonnage Gases hydrogen and related product sales constituted approximately 21% of consolidated sales in fiscal year 2013, 19% in fiscal year 2012, and 21% in fiscal year 2011.

### **Electronics and Performance Materials**

Electronics and Performance Materials employs applications technology to provide solutions to a broad range of global industries through chemical synthesis, analytical technology, process engineering, and surface science. This segment provides the electronics industry with specialty gases (such as nitrogen trifluoride, arsine, phosphine, white ammonia, silicon tetrafluoride, carbon tetrafluoride, hexafluoromethane, critical etch gases, and tungsten hexafluoride), tonnage gases (primarily nitrogen), chemicals mechanical planarization slurries, specialty chemicals, services, and equipment primarily for the manufacture of silicon and compound semiconductors and thin film transistor liquid crystal displays. These products are delivered through various supply chain methods, including bulk delivery systems or distribution by pipelines such as those located in California's Silicon Valley; Phoenix, Arizona; Tainan, Taiwan; Gumi and Giheung, Korea; and Tianjin China.

Electronics and Performance Materials also provides performance materials for a wide range of products, including coatings, inks, adhesives, civil engineering, personal care, institutional and industrial cleaning, mining, oil refining, and polyurethanes, and focuses on the development of new materials aimed at providing unique functionality to emerging markets. Principal performance materials include polyurethane catalysts and other additives for polyurethane foam, epoxy amine curing agents and auxiliary products for epoxy systems, specialty surfactants for formulated systems, and functional additives for industrial cleaning and mining industries.

The Electronics and Performance Materials segment uses a wide variety of raw materials, including ammonia, tungsten powder, hydrogen fluoride, amines, alcohols, epoxides, organic acids, and ketones. During fiscal year 2013, no significant difficulties were encountered in obtaining adequate supplies of energy or raw materials.

## **Table of Contents**

The Electronics and Performance Materials segment faces competition on a product-by-product basis against competitors ranging from niche suppliers with a single product to larger and more vertically integrated companies. Competition is principally conducted on the basis of price, quality, product performance, reliability of product supply, technical innovation, service, and global infrastructure.

Total sales from Electronics and Performance Materials constituted approximately 22% of consolidated sales in fiscal year 2013, 24% in fiscal year 2012, and 24% in fiscal year 2011.

## **Equipment and Energy**

Equipment and Energy designs and manufactures cryogenic equipment for air separation, hydrocarbon recovery and purification, natural gas liquefaction (LNG), and helium distribution (cryogenic transportation containers), and serves energy markets in a variety of ways.

Equipment is sold globally to customers in the chemical and petrochemical manufacturing, oil and gas recovery and processing, and steel and primary metals processing industries. The segment also provides a broad range of plant design, engineering, procurement, and construction management services to its customers.

Energy markets are served through the Company's operation and partial ownership of cogeneration and flue gas desulfurization facilities. In addition, we are developing hydrogen as an energy carrier, waste-to-energy facilities to produce electricity, carbon capture technologies for a variety of industrial and power applications, and oxygen-based technologies to serve energy markets in the future. The Company operates and owns a 48.8% interest in a 112-megawatt gas-fueled power generation facility in Thailand. The Company also operates and owns a 70% interest in a flue gas desulfurization facility in Indiana.

Steel, aluminum, and capital equipment subcomponents (compressors, etc.) are the principal raw materials in the equipment portion of this segment. Adequate raw materials for individual projects are acquired under firm purchase agreements. Limestone is the largest cost component in the production of energy. The Company mitigates these cost components, in part, through long-term cost pass-through contracts. During fiscal year 2013, no significant difficulties were encountered in obtaining adequate supplies of raw materials.

Equipment and Energy competes with a great number of firms for all of its offerings except LNG heat exchangers, for which there are fewer competitors due to the limited market size and proprietary technologies. Competition is based primarily on technological performance, service, technical know-how, price, and performance guarantees.

The backlog of equipment orders (including letters of intent believed to be firm) from third-party customers was approximately \$402 million on 30 September 2013, approximately 6% of which is for cryogenic equipment and 66% of which is for LNG heat exchangers, as compared with a total backlog of approximately \$450 million on 30 September 2012. The Company expects that approximately \$250 million of the backlog on 30 September 2013 will be completed during fiscal year 2014.

## **Narrative Description of the Company's Business Generally**

The Company, through subsidiaries, affiliates, and less-than-controlling interests, conducts business in over 50 countries outside the United States. Its international businesses are subject to risks customarily encountered in foreign operations, including fluctuations in foreign currency exchange rates and controls; import and export controls; and other economic, political, and regulatory policies of local governments.

The Company has majority or wholly owned foreign subsidiaries that operate in Canada, 18 European countries (including the United Kingdom, the Netherlands, and Spain), 11 Asian countries (including China, Korea, and Taiwan), 8 Latin American countries (including Chile and Brazil) and 2 African countries. The Company also owns less-than-controlling interests in entities operating in Europe, Asia, Africa, the Middle East, and Latin America (including Italy, Germany, China, India, Saudi Arabia, Singapore, Thailand, United Arab Emirates, South Africa, and Mexico).

Financial information about the Company's foreign operations and investments is included in Note 8, Summarized Financial Information of Equity Affiliates; Note 22, Income Taxes; and Note 25, Business Segment and Geographic Information, to the consolidated financial statements included under Item 8, herein. Information about foreign currency translation is included under Foreign Currency in Note 1, Major Accounting Policies, and information on the Company's exposure to currency fluctuations is included in Note 13, Financial Instruments, to the consolidated financial statements, included under Item 8, below, and in Foreign Currency Exchange Rate Risk, included under Item 7A, below. Export sales from operations in the United States to third-party customers amounted to \$410.3 million, \$521.1 million, and \$537.3 million in fiscal years 2013, 2012, and 2011, respectively.





---

## **Table of Contents**

### **Technology Development**

The Company pursues a market-oriented approach to technology development through research and development, engineering, and commercial development processes. It conducts research and development principally in its laboratories located in the United States (Trexlerstown, Pennsylvania; Carlsbad, California; Milton, Wisconsin; and Phoenix, Arizona), Canada (Vancouver), the United Kingdom (Basingstoke and Carrington), Germany (Hamburg), the Netherlands (Utrecht), Spain (Barcelona), Japan (Kawasaki), China (Shanghai), Korea (Giheung), and Taiwan (Chupei and Hsinchu City). The Company also funds and cooperates in research and development programs conducted by a number of major universities and undertakes research work funded by others principally the United States government.

The Company's corporate research groups, which include science and process technology centers, support the research efforts of various businesses throughout the Company. Development of technology for use within Merchant Gases, Tonnage Gases, and Equipment and Energy focuses primarily on new and improved processes and equipment for the production and delivery of industrial gases and new or improved applications for all such products. Research and technology development for Electronics and Performance Materials supports development of new products and applications to strengthen and extend the Company's present positions. Work is also performed in Electronics and Performance Materials to lower processing costs and develop new processes for the new products.

Research and development expenditures were \$133.7 million during fiscal year 2013, \$126.4 million in fiscal year 2012, and \$118.8 million in fiscal year 2011. In addition, the Company expended \$45.5 million on customer-sponsored research activities during fiscal year 2013, \$45.4 million in fiscal year 2012, and \$29.1 million in fiscal year 2011.

As of 1 November 2013, the Company owns 972 United States patents, 3,439 foreign patents, and is a licensee under certain patents owned by others. While the patents and licenses are considered important, the Company does not consider its business as a whole to be materially dependent upon any particular patent, patent license, or group of patents or licenses.

### **Environmental Controls**

The Company is subject to various environmental laws and regulations in the countries in which it has operations. Compliance with these laws and regulations results in higher capital expenditures and costs. From time to time, the Company is involved in proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA: the federal Superfund law), Resource Conservation and Recovery Act (RCRA), and similar state and foreign environmental laws relating to the designation of certain sites for investigation or remediation. Additional information with respect to these proceedings is included under Item 3, Legal Proceedings, below. The Company's accounting policy for environmental expenditures is discussed in Note 1, Major Accounting Policies, and environmental loss contingencies are discussed in Note 17, Commitments and Contingencies, to the consolidated financial statements, included under Item 8, below.

The amounts charged to income from continuing operations related to environmental matters totaled \$37.1 million in fiscal 2013, \$44.7 million in 2012, and \$34.0 million in 2011. These amounts represent an estimate of expenses for compliance with environmental laws, and activities undertaken to meet internal Company standards. Refer to Note 17, Commitments and Contingencies, to the consolidated financial statements for additional information.

Although precise amounts are difficult to determine, the Company estimates that we spent \$4.0 million in both 2013 and 2012, on capital projects to control pollution. Capital expenditures to control pollution in future years are estimated at approximately \$4.0 million in both 2014 and 2015.

### **Employees**

On 30 September 2013, the Company (including majority-owned subsidiaries) had approximately 21,600 employees, of whom approximately 21,300 were full-time employees and of whom approximately 13,600 were located outside the United States. The Company has collective bargaining agreements with unions at various locations that expire on various dates over the next four years. The Company considers relations with its employees to be satisfactory.

### **Available Information**

All periodic and current reports, registration statements, and other filings that the Company is required to file with the Securities and Exchange Commission (SEC), including the Company's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) of the Securities Exchange Act of 1934 (the 1934 Act Reports), are available free of charge through



## **Table of Contents**

the Company's Internet website at [www.airproducts.com](http://www.airproducts.com). Such documents are available as soon as reasonably practicable after electronic filing of the material with the SEC. All 1934 Act Reports filed during the period covered by this report were available on the Company's website on the same day as filing.

The public may also read and copy any materials filed by the Company with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy, and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is [www.sec.gov](http://www.sec.gov).

## **Seasonality**

Although none of the four business segments are subject to seasonal fluctuations to any material extent, the Electronics and Performance Materials segment is susceptible to the cyclical nature of the electronics industry and to seasonal fluctuations in underlying end-use performance materials markets.

## **Working Capital**

The Company maintains inventory where required to facilitate the supply of products to customers on a reasonable delivery schedule. Merchant Gases inventory consists primarily of industrial, specialty gas, and crude helium inventories supplied to customers through liquid bulk and packaged gases supply modes. Electronics and Performance Materials inventories consist primarily of bulk and packaged specialty gases and chemicals, bulk and packaged performance chemical solutions and also include inventories to support sales of equipment and services. Specialty and performance chemical inventories are stated at the lower of cost or market. Tonnage Gases and Equipment and Energy have limited inventory.

## **Customers**

We do not have a homogeneous customer base or end market, and no single customer accounts for more than 10% of our consolidated revenues. The Tonnage Gases and Electronics and Performance Materials segments do have concentrations of customers in specific industries, primarily refining, chemicals, and electronics. Within each of these industries, the Company has several large-volume customers with long-term contracts. A negative trend affecting one of these industries, or the loss of one of these major customers, although not material to our consolidated revenues, could have an adverse impact on the affected segment.

## **Governmental Contracts**

No segment's business is subject to a government entity's renegotiation of profits or termination of contracts that would be material to our business as a whole.

**Table of Contents****Executive Officers of the Company**

The Company's executive officers and their respective positions and ages on 21 November 2013 follow.

Information with respect to offices held is stated in fiscal years.

Name	Age	Office
M. Scott Crocco (A)	49	Senior Vice President and Chief Financial Officer (became Senior Vice President and Chief Financial Officer in 2013 and Vice President and Corporate Controller in 2008).
Stephen J. Jones (A)	52	Senior Vice President and General Manager, Tonnage Gases, Equipment and Energy and China President (became Senior Vice President and General Manager, Tonnage Gases, Equipment and Energy and China President in 2011; Senior Vice President and General Manager, Tonnage Gases, Equipment and Energy in 2009; Senior Vice President, General Counsel and Secretary in 2008).
Patricia A. Mattimore (A)	53	Senior Vice President - Supply Chain (became Senior Vice President - Supply Chain in 2014 and Vice President and General Manager of Performance Materials in 2009).
John E. McGlade (1) (A)(B)(C)	59	Chairman, President, and Chief Executive Officer (became Chairman and Chief Executive Officer in 2008).
Guillermo Novo (A)	51	Senior Vice President and General Manager - Electronics, Performance Materials, Strategy and Technology (became Senior Vice President and General Manager Electronics, Performance Materials, Strategy and Technology in 2012; Group Vice President, Dow Coating Materials at Dow Chemical Company in 2010; Vice President, Polyurethanes Business at Dow Chemical Company in 2009; and Vice President at Rohm and Haas in 2008).
Corning F. Painter (A)	51	Senior Vice President and General Manager - Merchant Gases (became Senior Vice President and General Manager - Merchant Gases in 2014; Senior Vice President - Supply Chain in 2012; Senior Vice President - Corporate Strategy and Technology in 2011; and Vice President and General Manager, Global Electronics in 2007).
John D. Stanley (A)	55	Senior Vice President, General Counsel and Chief Administrative Officer (became Senior Vice President, General Counsel and Chief Administrative Officer in 2013; Senior Vice President and General Counsel in 2009; and Assistant General Counsel, Americas and Europe in 2007).

(A) Member, Corporate Executive Committee

(B) Member, Board of Directors

(C) Member, Executive Committee of the Board of Directors

(1) Mr. McGlade has announced that he plans to retire in 2014.

---

**Table of Contents**

**ITEM 1A. RISK FACTORS**

In conjunction with evaluating an investment in the Company and the forward-looking information contained in this Annual Report on Form 10-K or presented elsewhere by management from time to time, you should carefully read the following risk factors. Any of the following risks could have a material adverse effect on our business, operating results, financial condition, and the actual outcome of matters as to which forward-looking statements are made and could adversely affect the value of an investment in our common stock as well. While we believe we have identified and discussed below the key risk factors affecting our business, there may be additional risks and uncertainties that adversely affect our business, performance, or financial condition in the future that are not presently known, are not currently believed to be significant, or are not identified below because they are common to all businesses.

**Overall Economic Conditions** A weakening or reversal of economic recovery in certain markets in which the Company does business may decrease the demand for its goods and services and adversely impact its revenues, operating results, and cash flow.

Demand for the Company's products and services depends in part on the general economic conditions affecting the countries and industries in which the Company does business. In the past few years, uncertain economic conditions in certain geographies and industries served by the Company have impacted and may in the future impact demand for the Company's products and services, in turn negatively impacting the Company's revenues and earnings. Unfavorable conditions can depress sales in a given market, affect our margins, constrain our operating flexibility, or result in charges which are unusual or nonrecurring. Excess capacity in the Company's or its competitors' manufacturing facilities could decrease the Company's ability to maintain pricing and generate profits. Unanticipated contract terminations or project delays by current customers can also negatively impact financial results. Our operating results in one or more segments may also be affected by uncertain or deteriorating economic conditions particularly germane to that segment or to particular customer markets within that segment.

**Operational, Political, and Legal Risks of International Operations** The Company's foreign operations can be adversely impacted by nationalization or expropriation of property, undeveloped property rights and legal systems, or political instability. Developing market operations present special risks.

The majority of the Company's revenue is derived from international operations. In addition, the Company is actively investing significant capital and other resources in emerging markets. The Company's operations in certain foreign jurisdictions may be subject to project delays due to unanticipated government actions and to nationalization and expropriation risk, and some of its contractual relationships within these jurisdictions are subject to cancellation without full compensation for loss. Economic and political conditions within foreign jurisdictions, social unrest, or strained relations between countries can cause fluctuations in demand, price volatility, supply disruptions, or loss of property. The occurrence of any of these risks could have a material adverse impact on the Company's operations and financial results.

Our developing market operations may be subject to greater risks than those faced by our operations in mature economies, including geopolitical, legal, economic and talent risks. We expect to achieve our long-term financial goals, in part, by achieving disproportionate growth in developing regions. Should growth rates or our market share fall substantially below expected levels in these regions, our results could be negatively impacted. Our success will depend, in part, on our ability to manage the risks inherent in operating in a developing market, including unfamiliar regulatory environments, new relationships with local partners, language and cultural differences, and tailoring products for acceptance by local markets.

**Interest Rate Increases** The Company's earnings, cash flow, and financial position can be impacted by interest rate increases and access to credit.

At 30 September 2013, the Company had total consolidated debt of \$6,273.6 million, of which \$1,617.3 million will mature in the next twelve months. The Company expects to continue to incur indebtedness to fund new projects and replace maturing debt. Although the Company actively manages its interest rate risk through the use of derivatives and diversified debt obligations, not all borrowings at variable rates are hedged, and new debt will be priced at market rates. If interest rates increase, the Company's interest expense could increase significantly, affecting earnings and reducing cash flow available for working capital, capital expenditures, acquisitions, and other purposes. In addition, changes by any rating agency to the Company's outlook or credit ratings could increase the Company's cost of borrowing and weaken our ability to access capital and credit markets on terms commercially acceptable to us. For a more detailed discussion of interest rate risk, see Item 7A, below.

---

## **Table of Contents**

### **New Technologies New technologies create performance risks that could impact our financial results or reputation.**

A number of new technologies and new product offerings are being developed or implemented by the Company. Some of our existing technologies are being implemented in products and designs beyond our experience base. These technological expansions can create nontraditional performance risks to our operations. Failure of the technologies to work as predicted or unintended consequences of new designs or uses, could lead to cost overruns, project delays, financial penalties, or damage to our reputation.

### **Raw Material and Energy Cost and Availability Interruption in ordinary sources of supply or an inability to recover increases in energy and raw material costs from customers could result in lost sales or reduced profitability.**

Hydrocarbons, including natural gas, are the primary feedstock for the production of hydrogen, carbon monoxide, and syngas. Energy, including electricity, natural gas, and diesel fuel for delivery trucks, is the largest cost component of the Company's business. Because the Company's industrial gas facilities use substantial amounts of electricity, energy price fluctuations could materially impact the Company's revenues and earnings. A disruption in the supply of energy or raw materials, whether due to market conditions, legislative or regulatory actions, natural events, or other disruption, could prevent the Company from meeting its contractual commitments, harming its business and financial results.

The Company's supply of crude helium for purification and resale is largely dependent upon natural gas production by crude helium suppliers. Lower natural gas production (which may result from natural gas pricing or supplier operating issues) or interruptions in sales from other crude helium suppliers, can reduce the Company's supplies of crude helium available for processing and resale to its customers.

The Electronics and Performance Materials segment uses a wide variety of raw materials, including alcohols, ethyleneamines, cyclohexylamine, acrylonitriles, and glycols. Shortages or price escalation in these materials could negatively impact financial results.

The Company typically contracts to pass through cost increases in energy and raw materials to its customers, but cost variability can still have a negative impact on its results. The Company may not be able to raise prices as quickly as costs rise, or competitive pressures may prevent full recovery. Increases in energy or raw material costs that cannot be passed on to customers for competitive or other reasons would negatively impact the Company's revenues and earnings. Even where costs are passed through, price increases can cause lower sales volume.

### **Regulatory Compliance The Company is subject to extensive government regulation in jurisdictions around the globe in which it does business. Changes in regulations addressing, among other things, environmental compliance, import/export restrictions, anti-bribery and corruption, and taxes, can negatively impact the Company's operations and financial results.**

The Company is subject to government regulation in the United States and foreign jurisdictions in which it conducts its business. The application of laws and regulations to the Company's business is sometimes unclear. Compliance with laws and regulations may involve significant costs or require changes in business practice that could result in reduced profitability. Determination of noncompliance can result in penalties or sanctions that could also impact financial results. Compliance with changes in laws or regulations can require additional capital expenditures or increase operating costs. Export controls or other regulatory restrictions could prevent the Company from shipping its products to and from some markets or increase the cost of doing so. Export restrictions continue to attract external focus by multiple customs and export enforcement authorities. Changes in tax laws and regulations and international tax treaties could affect the financial results of the Company's businesses. Increasingly aggressive enforcement of anti-bribery and anti-corruption requirements, including the U.S. Foreign Corrupt Practices Act, the United Kingdom Bribery Act and the China Anti-Unfair Competition Law, could subject the Company to criminal or civil sanctions if a violation occurs. We have internal control policies and procedures to foster compliance with these laws, including compliance and training programs for our employees; however, the foregoing cannot eliminate the risk that violations could be committed by our employees, agents or joint venture partners.

### **Greenhouse Gases Legislative and regulatory responses to global climate change create financial risk.**

Some of the Company's operations are within jurisdictions that have or are developing regulatory regimes governing emissions of greenhouse gases (GHG). These include existing and expanding coverage under the European Union Emissions Trading Scheme; mandatory reporting and reductions at manufacturing facilities in Alberta, Canada; and

## **Table of Contents**

mandatory reporting and anticipated constraints on GHG emissions in Ontario, Canada and South Korea. In addition, the U.S. Environmental Protection Agency is regulating GHG emissions for new construction and major modifications to existing facilities.

Increased public concern may result in more international, U.S. federal, and/or regional requirements to reduce or mitigate the effects of GHG. Although uncertain, these developments could increase the Company's costs related to consumption of electric power, hydrogen production, and fluorinated gases production. The Company believes it will be able to mitigate some of the increased costs through its contractual terms, but the lack of definitive legislation or regulatory requirements prevents accurate estimate of the long-term impact on the Company. Any legislation that limits or taxes GHG emissions could impact the Company's growth, increase its operating costs, or reduce demand for certain of its products.

### **Environmental Compliance Costs and expenses resulting from compliance with environmental regulations may negatively impact the Company's operations and financial results.**

The Company is subject to extensive federal, state, local, and foreign environmental and safety laws and regulations concerning, among other things, emissions in the air; discharges to land and water; and the generation, handling, treatment, and disposal of hazardous waste and other materials. The Company takes its environmental responsibilities very seriously, but there is a risk of environmental impact inherent in our manufacturing operations and transportation of chemicals. Future developments and more stringent environmental regulations may require the Company to make additional unforeseen environmental expenditures. In addition, laws and regulations may require significant expenditures for environmental protection equipment, compliance, and remediation. These additional costs may adversely affect financial results. For a more detailed description of these matters, see Narrative Description of the Company's Business Generally Environmental Controls, above.

### **We may not be able to successfully implement initiatives to improve productivity and streamline operations to control or reduce costs.**

Achieving our long-term profitability and return goals depends significantly on our efforts to control or reduce our operating costs. Because many of our costs are affected by factors outside or substantially outside our control, we generally must seek to control or reduce costs through operating efficiency or other initiatives. Such initiatives are important to our success. If we are not able to identify and complete initiatives designed to control or reduce costs and increase operating efficiency, or if the cost savings initiatives we have implemented to date, or any future cost-savings initiatives, do not generate expected cost savings, our financial results could be adversely impacted.

### **Currency Fluctuations Changes in foreign currencies may adversely affect the Company's financial results.**

The majority of the Company's sales are derived from outside the United States and denominated in foreign currencies. The Company also has significant production facilities that are located outside of the United States. Financial results therefore will be affected by changes in foreign currency rates. The Company uses certain financial instruments to mitigate these effects, but it is not cost-effective to hedge foreign currency exposure in a manner that would entirely eliminate the effects of changes in foreign exchange rates on earnings, cash flows, and fair values of assets and liabilities. Accordingly, reported sales, net earnings, cash flows, and fair values have been and in the future will be affected by changes in foreign exchange rates. For a more detailed discussion of currency exposure, see Item 7A, below.

### **Catastrophic Events Catastrophic events could disrupt the Company's operations or the operations of its suppliers or customers, having a negative impact on the Company's business, financial results, and cash flow.**

The Company's operations could be impacted by catastrophic events outside the Company's control, including severe weather conditions such as hurricanes, floods, earthquakes, and storms, or acts of war and terrorism. Any such event could cause a serious business disruption that could affect the Company's ability to produce and distribute its products and possibly expose it to third-party liability claims. Additionally, such events could impact the Company's suppliers or customers, in which event energy and raw materials may be unavailable to the Company, or its customers may be unable to purchase or accept the Company's products and services. Any such occurrence could have a negative impact on the Company's operations and financial results.

## **Table of Contents**

### **Operational Risks** Operational and execution risks may adversely affect the Company's operations or financial results.

The Company's operation of its facilities, pipelines, and delivery systems inherently entails hazards that require continuous oversight and control, such as pipeline leaks and ruptures, fire, explosions, toxic releases, mechanical failures, or vehicle accidents. If operational risks materialize, they could result in loss of life, damage to the environment, or loss of production, all of which could negatively impact the Company's ongoing operations, reputation, financial results, and cash flow. In addition, the Company's operating results are dependent on the continued operation of its production facilities and its ability to meet customer requirements. Operating results are also dependent on the Company's ability to complete new construction projects on time, on budget, and in accordance with performance requirements. Failure to do so may expose the Company to loss of revenue, potential litigation, and loss of business reputation.

### **Information Security** The security of the Company's Information Technology systems could be compromised, which could adversely affect its ability to operate.

We depend on information technology to enable us to operate efficiently and interface with customers as well as to maintain financial accuracy and efficiency. Our information technology capabilities are delivered through a combination of internal and outsourced service providers. If we do not allocate and effectively manage the resources necessary to build and sustain the proper technology infrastructure, we could be subject to transaction errors, processing inefficiencies, the loss of customers, business disruptions, or the loss of or damage to our intellectual property through security breach. As with all large systems, our information systems could be penetrated by outside parties intent on extracting information, corrupting information, or disrupting business processes. The Company's systems have in the past been and likely will in the future be subject to hacking attempts. To date, the Company is not aware of any impact on its operations or financial results from such attempts; however, unauthorized access could disrupt our business operations, result in the loss of assets, and have a material adverse effect on our business, financial condition, or results of operations.

The Company's business involves the use, storage, and transmission of information about its employees, vendors, and customers. The protection of such information, as well as the Company's information, is critical to the Company. The regulatory environment surrounding information security and privacy is increasingly demanding, with the frequent imposition of new and constantly changing requirements. The Company has established policies and procedures to help protect the security and privacy of this information. The Company also, from time to time, exports sensitive customer data and technical information to recipients outside the United States. Breaches of our security measures or the accidental loss, inadvertent disclosure, or unapproved dissemination of proprietary information or sensitive or confidential data about us or our customers, including the potential loss or disclosure of such information or data as a result of fraud, trickery, or other forms of deception, could expose us, our customers, or the individuals affected to a risk of loss or misuse of this information, result in litigation and potential liability for us, damage our reputation, or otherwise harm our business.

### **Litigation and Regulatory Proceedings** The Company's financial results may be affected by various legal and regulatory proceedings, including those involving antitrust, tax, environmental, or other matters.

The Company is subject to litigation and regulatory proceedings in the normal course of business and could become subject to additional claims in the future, some of which could be material. The outcome of existing legal proceedings may differ from the Company's expectations because the outcomes of litigation, including regulatory matters, are often difficult to predict reliably. Various factors or developments can lead the Company to change current estimates of liabilities and related insurance receivables, where applicable, or make such estimates for matters previously not susceptible to reasonable estimates, such as a significant judicial ruling or judgment, a significant settlement, significant regulatory developments, or changes in applicable law. A future adverse ruling, settlement, or unfavorable development could result in charges that could have a material adverse effect on the Company's results of operations in any particular period. For a more detailed discussion of the legal proceedings involving the Company, see Item 3, below.

### **Asset Impairments** The Company may be required to record impairment on its long-lived assets.

Weak demand may cause underutilization of the Company's manufacturing capacity or elimination of product lines; contract terminations or customer shutdowns may force sale or abandonment of facilities and equipment; and contractual provisions may allow customer buyout of facilities or equipment. These or other events associated with weak economic conditions or specific end market, product, or customer events may require the Company to record



---

## **Table of Contents**

an impairment on tangible assets, such as facilities and equipment, or intangible assets, such as intellectual property or goodwill, which would have a negative impact on its financial results.

### **Competition Inability to compete effectively in a segment could adversely impact sales and financial performance.**

The Company faces strong competition from several large global competitors and many smaller regional ones in many of its business segments. Introduction by competitors of new technologies, competing products, or additional capacity could weaken demand for or impact pricing of the Company's products, negatively impacting financial results. In addition, competitors' pricing policies could materially affect the Company's profitability or its market share.

### **Pension Liabilities The Company's results of operations and financial condition could be negatively impacted by its pension plans.**

Adverse equity market conditions and volatility in the credit markets may have an unfavorable impact on the value of the Company's pension trust assets and its future estimated pension liabilities, significantly affecting the net periodic benefit costs of its pension plans and ongoing funding requirements for these plans. As a result, the Company's financial results and cash flow in any period could be negatively impacted. For information about potential impacts from pension funding and the use of certain assumptions regarding pension matters, see the discussion in Note 16, Retirement Benefits, to the consolidated financial statements, included in Item 8, below.

## **ITEM 1B. UNRESOLVED STAFF COMMENTS**

We have not received any written comments from the Commission staff that remain unresolved.

## **ITEM 2. PROPERTIES**

Air Products owns its principal administrative offices, which are our headquarters in Trexlertown, Pennsylvania and administrative offices in Hersham, U.K. and Santiago, Chile. The Company leases administrative offices in Ontario, Canada; Crewe, U.K.; Brussels, Belgium; Paris, France; Barcelona and Madrid, Spain; Rotterdam and Amsterdam, the Netherlands; Bochum, Germany; Moscow, Russia; Warsaw, Poland; São Paulo, Brazil; Shanghai, Beijing and Xi'an, China; Taipei, Taiwan; Kuala Lumpur, Malaysia; Kawasaki, Japan; Seoul, South Korea; and Singapore.

The following is a description of the properties used by our four business segments. We believe that, in general, our facilities are suitable and adequate for our current and anticipated future levels of operation and are adequately maintained.

### **Merchant Gases**

Merchant Gases currently operates 300 production and distribution facilities in North and South America (98 are located on owned property), 152 facilities in Europe and Middle East and Africa (50 are on owned property), and 87 facilities within Asia (11 are on owned property). The production and distribution facilities include approximately 30 integrated sites that primarily serve the Tonnage Gases or Electronics businesses. These assets are also included in information provided for those businesses. We added 12 liquid CO<sub>2</sub> locations with the acquisition of EPCO Carbon Dioxide Products, Inc. in May of this year. Helium is processed at sites in Kansas and Texas and then distributed to/from transfill sites in the U.S., Canada, Europe, and Asia. Sales support offices are located at our global office centers above, at 9 leased properties in the U.S. and Canada, at 9 leased sites and at production plant sites in Europe, at 10 leased sites and at production plant sites in Asia and at regional production plant sites in South America.

Research and development (R&D) activities for this segment are conducted in Trexlertown, Pennsylvania; Basingstoke and Carrington in the U.K.; a leased site in British Columbia, Canada; and a leased site in Shanghai, China.

### **Tonnage Gases**

Tonnage Gases operates over 65 plants (9 are located on owned property) in North and South America that produce over 300 standard tons per day of product. Over 40 of these facilities produce or recover hydrogen. Many of the hydrogen facilities support the major pipeline systems located in Los Angeles, California and Alberta, Canada; and along the United States Gulf Coast through the Gulf Coast Connection Pipeline, which interconnects Texas and Louisiana pipeline networks. The segment also operates 30 tonnage plants in Europe, the Middle East, and Africa

and 26 tonnage plants within Asia. The majority of the sites in this segment are under structured long-term leasehold type agreements. Sales support offices are located at our headquarters in Trexlertown, Pennsylvania and leased

## **Table of Contents**

offices in Texas, Louisiana, California, and Calgary, Alberta in North America as well as in Hersham, U.K.; Rotterdam, the Netherlands; Moscow, Russia; Shanghai, China; Singapore; Bahrain; and Doha, Qatar.

### **Electronics and Performance Materials**

The Electronics business within this segment produces, packages, and stores nitrogen, specialty gases, and electronic chemicals, and manufactures equipment at 40 sites in the United States (9 of which are owned and the majority of the remaining are located on customer sites), nine leased facilities in Europe and the Middle East, and 55 facilities in Asia (13 of which are owned, 28 of which are located on customer sites and the remainder are leased or term grants).

The Performance Materials division within this segment operates 5 production facilities in the United States, 3 in Europe and 4 in Asia. Seven of the Performance Materials facility sites are owned.

The segment conducts R&D related activities at 11 locations worldwide, including Trexlertown, Pennsylvania; Carlsbad, California; Tempe, Arizona; Utrecht, the Netherlands; at 3 sites in Germany; Chubei and Hsin Chu, Taiwan; Shanghai, China; and Kawasaki, Japan.

### **Equipment and Energy**

The Equipment division operates at eight facilities in the U.S., one in Europe and three in Asia. We manufacture a significant portion of the world's supply of LNG equipment at our Wilkes-Barre, Pennsylvania, site. In early 2014, the Company expects to open its new LNG manufacturing facility at the Port of Manatee, Florida. Air separation columns and cold boxes for Company-owned facilities and third-party sales are produced by operations in Caojing, China and Tanjung Langsat, Malaysia as well as in the Wilkes-Barre facility. Cryogenic transportation containers for liquid helium are manufactured and reconstructed at facilities in eastern Pennsylvania; Liberal, Kansas; and Istres, France. Equipment commercial and engineering team members are located at offices in Trexlertown and Bethlehem, Pennsylvania; Hersham, U.K.; Pune, India; and Shanghai, China.

The Energy division produces electric power at various facilities globally, including a gas-fueled power generation facility in Thailand, in which the Company has a 48.8% interest. Flue gas desulfurization operations are conducted at the Pure Air facility in Chesterton, Indiana. The Company is constructing a 50MW renewable energy facility in Tees Valley, U.K. with the expected start-up in 2014 and has announced plans to build a second renewable energy facility on an adjacent site. Energy commercial and engineering team members are located at Trexlertown, Pennsylvania, Hersham and Tees Valley, U.K.

The Company or its affiliates own approximately 33% of the real estate in this segment and lease the remaining locations.

### **ITEM 3. LEGAL PROCEEDINGS**

In the normal course of business, the Company and its subsidiaries are involved in various legal proceedings, including contract, product liability, intellectual property, and insurance matters. Although litigation with respect to these matters is routine and incidental to the conduct of our business, such litigation could result in large monetary awards, especially if a civil jury is allowed to determine compensatory and/or punitive damages. However, we believe that litigation currently pending to which we are a party will be resolved without any material adverse effect on our financial position, earnings, or cash flows.

From time to time, we are also involved in proceedings, investigations, and audits involving governmental authorities in connection with environmental, health, safety, competition, and tax matters.

The Company is a party to proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act (the federal Superfund law); the Resource Conservation and Recovery Act (RCRA); and similar state environmental laws relating to the designation of certain sites for investigation or remediation. Presently there are approximately 33 sites on which a final settlement has not been reached where the Company, along with others, has been designated a Potentially Responsible Party by the Environmental Protection Agency or is otherwise engaged in investigation or remediation, including cleanup activity at certain of its current or former manufacturing sites. We do not expect that any sums we may have to pay in connection with these matters would have a material adverse effect on our consolidated financial position. Additional information on the Company's environmental exposure is included under Narrative Description of the Company's Business Generally Environmental Controls.



**Table of Contents**

In September 2010, the Brazilian Administrative Council for Economic Defense (CADE) issued a decision against our Brazilian subsidiary, Air Products Brasil Ltda., and several other Brazilian industrial gas companies for alleged anticompetitive activities. CADE imposed a civil fine of R\$179.2 million (approximately \$81 million at 30 September 2013) on Air Products Brasil Ltda. This fine was based on a recommendation by a unit of the Brazilian Ministry of Justice whose investigation began in 2003, alleging violation of competition laws with respect to the sale of industrial and medical gases. The fines are based on a percentage of the Company's total revenue in Brazil in 2003.

We have denied the allegations made by the authorities and filed an appeal in October 2010 to the Brazilian courts. Certain of the Company's defenses, if successful, could result in the matter being dismissed with no fine against us. The Company, with advice of its outside legal counsel, has assessed the status of this matter and has concluded that, although an adverse final judgment after exhausting all appeals is reasonably possible, such a judgment is not probable. As a result, no provision has been made in the consolidated financial statements.

While we do not expect that any sums we may have to pay in connection with these or any other legal proceeding would have a material adverse effect on our consolidated financial position or net cash flows, a future charge for regulatory fines or damage awards could have a significant impact on our net income in the period in which it is recorded.

**ITEM 4. NOT APPLICABLE****PART II****ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES**

Our common stock (ticker symbol APD) is listed on the New York Stock Exchange. Our transfer agent and registrar is American Stock Transfer & Trust Company, 6201 15<sup>th</sup> Avenue, Brooklyn, New York 11219, telephone (800) 937-5449 (U.S. and Canada) or (718) 921-8124 (all other locations); Internet website [www.amstock.com](http://www.amstock.com); and e-mail address [info@amstock.com](mailto:info@amstock.com). As of 31 October 2013, there were 7,040 record holders of our common stock. Quarterly stock prices, as reported on the New York Stock Exchange composite tape of transactions, and dividend information for the last two fiscal years appear below. Cash dividends on the Company's common stock are paid quarterly. Our objective is to pay dividends consistent with the reinvestment of earnings necessary for long-term growth. It is our expectation that we will continue to pay comparable cash dividends in the future.

**Quarterly Stock Information**

2013	High	Low	Close	Dividend
First	\$86.31	\$76.78	\$84.02	\$0.64
Second	90.34	84.15	87.12	0.71
Third	97.12	84.04	91.57	0.71
Fourth	114.75	90.12	106.57	0.71
				\$2.77
2012	High	Low	Close	Dividend
First	\$90.20	\$72.26	\$85.19	\$0.58
Second	92.48	85.60	91.80	0.64
Third	92.79	76.11	80.73	0.64
Fourth	85.83	77.21	82.70	0.64
				\$2.50

**Purchases of Equity Securities by the Issuer**

On 15 September 2011, the Board of Directors authorized the repurchase of up to \$1.0 billion of our outstanding common stock. This program does not have a stated expiration date. We repurchase shares pursuant to Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended, through repurchase agreements established with several brokers. During fiscal year 2013, we purchased 5.7 million of our outstanding shares at a cost of \$461.6 million. No purchases were made during the fourth quarter of 2013. At 30 September 2013, \$485.3 million in share

repurchase authorization remains.

**Table of Contents**

**Performance Graph**

The performance graph below compares the five-year cumulative returns of the Company's common stock with those of the Standard & Poor's 500 and Dow Jones Chemicals Composite Indices. The figures assume an initial investment of \$100 and the reinvestment of all dividends.

COMPARISON OF FIVE YEAR CUMULATIVE SHAREHOLDER RETURN

Air Products, S&P 500, and Chemicals Composite Indices

Comparative Growth of a \$100 Investment

(Assumes Reinvestment of All Dividends)

**Table of Contents****ITEM 6. SELECTED FINANCIAL DATA**

(Millions of dollars, except per share)	2013 <sup>(A)</sup>	2012 <sup>(A)</sup>	2011 <sup>(A)</sup>	2010 <sup>(A)</sup>	2009 <sup>(A)</sup>
<b>Operating Results</b>					
Sales	\$10,180	\$9,612	\$9,674	\$8,616	\$7,847
Cost of sales	7,472	7,052	7,098	6,289	5,819
Selling and administrative	1,066	947	942	887	882
Research and development	134	126	119	115	116
Business restructuring and cost reduction plans	232	327			298
Operating income	1,324	1,282	1,508	1,268	724
Equity affiliates income	168	154	154	127	112
Interest expense	142	124	116	122	122
Income tax provision	308	287	375	306	149
Income from continuing operations attributable to Air Products	1,004	999	1,134	942	554
Net income attributable to Air Products	994	1,167	1,224	1,029	631
Basic earnings per common share attributable to Air Products:					
Income from continuing operations	4.79	4.73	5.33	4.44	2.64
Net income	4.74	5.53	5.75	4.85	3.01
Diluted earnings per common share attributable to Air Products:					
Income from continuing operations	4.73	4.66	5.22	4.34	2.59
Net income	4.68	5.44	5.63	4.74	2.96
<b>Year-End Financial Position</b>					
Plant and equipment, at cost	\$19,530	\$18,046	\$16,859	\$15,934	\$15,387
Total assets	17,850	16,942	14,291	13,506	13,029
Working capital	212	726	848	790	494
Total debt <sup>(B)</sup>	6,274	5,292	4,562	4,128	4,500
Redeemable noncontrolling interest	376	393			
Air Products shareholders equity	7,042	6,477	5,796	5,547	4,792
Total equity	7,199	6,623	5,939	5,698	4,930
<b>Financial Ratios</b>					
Return on average Air Products shareholders equity <sup>(C)</sup>	15.3%	16.1%	19.4%	18.2%	11.5%
Operating margin	13.0%	13.3%	15.6%	14.7%	9.2%
Selling and administrative as a percentage of sales	10.5%	9.9%	9.7%	10.3%	11.2%
Total debt to total capitalization <sup>(B)(D)</sup>	45.3%	43.0%	43.4%	42.0%	47.7%
<b>Other Data</b>					
Depreciation and amortization	\$907	\$841	\$834	\$827	\$807
Capital expenditures on a GAAP basis <sup>(E)</sup>	1,748	2,560	1,366	1,092	1,194
Capital expenditures on a non-GAAP basis <sup>(E)</sup>	1,997	2,778	1,539	1,256	1,433
Cash provided by operating activities	1,553	1,765	1,710	1,485	1,286
Cash used for investing activities	1,697	2,435	1,170	1,014	998
Cash provided by (used for) financing activities	115	(78)	(485)	(580)	101
Dividends declared per common share	2.77	2.50	2.23	1.92	1.79
Weighted average common shares outstanding (in millions)	210	211	213	212	210
Weighted average common shares outstanding assuming dilution (in millions)	212	215	218	217	214
Book value per common share at year-end	\$33.35	\$30.48	\$27.57	\$25.94	\$22.68
Shareholders at year-end	7,000	7,500	7,900	8,300	8,600
Employees at year-end <sup>(F)</sup>	21,600	21,300	18,900	18,300	18,900

<sup>(A)</sup> Certain items which management does not believe to be indicative of on-going business trends are considered non-GAAP items in our results discussions. For 2013, these items include: (i) a charge to operating income of \$232 (\$158 after-tax, or \$.74 per share) related to business restructuring and cost reduction plans, (ii) expenses of \$10 (\$6 after-tax, or \$.03 per share) related to advisory costs. For 2012, these items include: (i) a charge to operating income of \$327 (\$222 after-tax, or \$1.03 per share) related to business restructuring and cost reduction plans, (ii) a gain of \$86 (\$55 after-tax, or \$.25 per share) related to the gain on our previously held equity interest in DA NanoMaterials, (iii) a charge of \$10 (\$6 after-tax, or \$.03 per share) related to a customer bankruptcy, (iv) a tax expense of \$44 (\$.20 per share) for a Spanish tax settlement,



## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

(v) a tax benefit of \$58 (\$.27 per share) for a favorable Spanish tax ruling.

For 2011 and 2010, these items include: expenses of \$49 (\$32 after-tax, or \$.14 per share) and \$96 (\$60 after-tax, or \$.28 per share), respectively, related to the net loss on Airgas transaction.

For 2009, these items include: (i) a charge of \$298 (\$200 after-tax, or \$.94 per share) related to the global cost reduction plan, (ii) an expense of \$32 (\$21 after-tax, or \$.10 per share) related to a customer bankruptcy and other asset actions, (iii) an expense of \$8 (\$5 after-tax, or \$.02 per share) related to a pension settlement loss.

**Table of Contents**

- (B) Total debt includes long-term debt, current portion of long-term debt, and short-term borrowings as of the end of the year.
- (C) Calculated using income from continuing operations attributable to Air Products and five-quarter average Air Products shareholders' equity.
- (D) Total capitalization includes total debt plus total equity plus redeemable noncontrolling interest as of the end of the year.
- (E) Capital expenditures on a GAAP basis include additions to plant and equipment, investment in and advances to unconsolidated affiliates, and acquisitions. The Company utilizes a non-GAAP measure in the computation of capital expenditures and includes spending associated with facilities accounted for as capital leases and purchases of noncontrolling interests. Refer to page 32 for a reconciliation of the GAAP to non-GAAP measures for 2013, 2012, and 2011. For 2010, the GAAP measure was adjusted by \$123 and \$42 for spending associated with facilities accounted for as capital leases and purchases of noncontrolling interests, respectively. For 2009, the GAAP measure was adjusted by \$239 for spending associated with facilities accounted for as capital leases.
- (F) Includes full- and part-time employees from continuing and discontinued operations.

**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

<u>Business Overview</u>	19
<u>2013 in Summary</u>	19
<u>2014 Outlook</u>	20
<u>Results of Operations</u>	21
<u>Reconciliation of Non-GAAP Financial Measures</u>	29
<u>Liquidity and Capital Resources</u>	31
<u>Contractual Obligations</u>	34
<u>Pension Benefits</u>	36
<u>Environmental Matters</u>	37
<u>Off-Balance Sheet Arrangements</u>	38
<u>Related Party Transactions</u>	38
<u>Inflation</u>	38
<u>Critical Accounting Policies and Estimates</u>	38
<u>New Accounting Guidance</u>	42
<u>Forward-Looking Statements</u>	42

The following discussion should be read in conjunction with the consolidated financial statements and the accompanying notes contained in this report. All comparisons in the discussion are to the corresponding prior year unless otherwise stated. All amounts presented are in accordance with U.S. generally accepted accounting principles (GAAP), except as noted. All amounts are presented in millions of dollars, except for share data, unless otherwise indicated.

Items such as income from continuing operations attributable to Air Products, net income attributable to Air Products, and diluted earnings per share attributable to Air Products are simply referred to as income from continuing operations, net income, and diluted earnings per share throughout this Management's Discussion and Analysis, unless otherwise stated.

The discussion of results that follows includes comparisons to non-GAAP financial measures. For 2013, the non-GAAP measures exclude the fourth quarter business restructuring and cost reduction plan and advisory costs. For 2012, the non-GAAP measures exclude the 2012 business restructuring and cost reduction plans (the photovoltaic (PV) market actions charge, the polyurethane intermediates (PUI) business actions charge, and the cost reduction plan charge), the customer bankruptcy charge, the gain on the previously held equity interest in DuPont Air Products NanoMaterials LLC (DA NanoMaterials), the Spanish tax settlement, and the Spanish tax ruling. For 2011, the non-GAAP measures exclude the net loss on Airgas transaction. The presentation of non-GAAP measures is intended to enhance the usefulness of financial information by providing measures that our management uses internally to evaluate our baseline performance on a comparable basis. The reconciliation of reported GAAP results to non-GAAP measures is presented on pages 29-31. Descriptions of the excluded items appear on pages 22-24.



## **Table of Contents**

### **BUSINESS OVERVIEW**

Air Products and Chemicals, Inc. and its subsidiaries serve energy, electronics, chemicals, metals, and manufacturing customers globally with a unique portfolio of products, services, and solutions that include atmospheric, process and specialty gases; performance materials; equipment; and technology. Geographically diverse, with operations in over 50 countries, in 2013 we had sales of \$10.2 billion, assets of \$17.9 billion, and a worldwide workforce of approximately 21,600 employees.

We organize our operations into four reportable business segments: Merchant Gases, Tonnage Gases, Electronics and Performance Materials, and Equipment and Energy. Refer to Note 25, Business Segment and Geographic Information, to the consolidated financial statements for additional details on our reportable business segments.

### **2013 IN SUMMARY**

In 2013, we achieved both sales and earnings growth. Our results did fall short of the expectations we set at the beginning of the year as a result of slower than expected global economic growth. Global manufacturing grew approximately 2% for the year and limited the opportunities for growth, particularly in our Europe and Asia Merchant Gases and Electronics businesses. Overall, sales increased by 6% resulting from acquisitions and higher energy cost pass-through. Our underlying sales were 1% higher on strength in our Tonnage Gases businesses, higher Performance Materials volumes, and LNG equipment activity partially offset by weakness in our Electronics equipment area. The impact from winding down our PUI business decreased underlying sales by 2%. Our operating income and diluted earnings per share both increased 2% versus the prior year.

While the difficult global economic environment persisted, we took actions to offset this weakness and to improve results in the future. We delivered significant cost savings from the 2012 European focused reorganization and committed to additional actions aimed at reducing costs through product exits and asset rationalizations, as well as organizational improvements. The additional actions are focused on improving our Electronics business, restructuring our global operations function, and further optimizing our cost structure in Europe. Finally, we remain on track to exit our PUI business in fiscal year 2014 as we continue to manage our business portfolio.

### **Highlights for 2013**

Sales of \$10,180.4 increased 6%, or \$568.7, as acquisitions and higher energy contractual cost pass-through to customers were partially offset by lower volumes from our previously announced decision to exit the PUI business.

Operating income of \$1,324.4 increased 3%, or \$42.0. On a non-GAAP basis, operating income of \$1,566.1 increased 2%, or \$32.4, with acquisitions and favorable volume mix partially offset by higher energy and distribution costs and higher operating costs, including pensions.

Income from continuing operations of \$1,004.2 increased 1%, or \$5.0, and diluted earnings per share from continuing operations of \$4.73 increased 2%, or \$.07. On a non-GAAP basis, income from continuing operations of \$1,168.5 increased 1%, or \$9.9, and diluted earnings per share from continuing operations of \$5.50 increased 2%, or \$.10. A summary table of changes in diluted earnings per share, including a non-GAAP reconciliation, is presented below.

Capital spending was \$1,747.8 for the year ended 30 September 2013. On a non-GAAP basis, capital spending of \$1,996.7 decreased 28%, primarily from the prior year acquisition of Indura S.A.

We purchased 5.7 million of our outstanding shares at a cost of \$461.6.

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

We increased our quarterly dividend by 11% from \$.64 to \$.71 per share. This represents the 31st consecutive year that we have increased our dividend payment.

For a discussion of the challenges, risks, and opportunities on which management is focused, refer to our 2014 Outlook discussions provided on pages 20 and 21 in the Management's Discussion and Analysis that follows.

**Table of Contents****Changes in Diluted Earnings per Share Attributable to Air Products**

	2013	2012	Increase (Decrease)
<b>Diluted Earnings per Share</b>			
Net income	\$4.68	\$5.44	\$(.76)
Income (Loss) from discontinued operations	(.05)	.78	(.83)
<b>Income from Continuing Operations GAAP Basis</b>	<b>\$4.73</b>	<b>\$4.66</b>	<b>\$0.07</b>
Business restructuring and cost reduction plans	.74	1.03	(.29)
Advisory costs	.03		.03
Customer bankruptcy		.03	(.03)
Gain on previously held equity interest		(.25)	.25
Q1 Spanish tax settlement		.20	(.20)
Q2 Spanish tax ruling		(.27)	.27
<b>Income from Continuing Operations Non-GAAP Basis</b>	<b>\$5.50</b>	<b>\$5.40</b>	<b>\$1.10</b>
<b>Operating income (after-tax)</b>			
Underlying business			
Volume (including PUI exit impact)			.08
Price/raw materials			(.14)
Costs/other			(.03)
Acquisitions			.19
Currency			.01
<b>Operating Income</b>			<b>.11</b>
<b>Other (after-tax)</b>			
Equity affiliates income			.05
Interest expense			(.06)
Noncontrolling interests			(.06)
Average shares outstanding			.06
<b>Other</b>			<b>(.01)</b>
<b>Total Change in Diluted Earnings per Share from Continuing Operations Non-GAAP Basis</b>			<b>\$1.10</b>

**2014 OUTLOOK**

Our 2014 outlook for global economic growth is modest, with a range from 2% - 4%. We expect that the U.S. will grow 2% - 4% as it continues to face unresolved fiscal challenges, weak job growth, low consumer confidence, and lower global demand. We are hopeful that an economic recovery will begin in Europe with growth of 0% - 2%. In Asia, we expect a gradual acceleration in growth, particularly in China, of 5% - 7%. In South America, we expect growth of 1% - 3%, which is largely dependent on global demand driving exports.

We anticipate higher earnings in 2014 from new plant onstreams, higher LNG activity, and volume loading on existing assets, recognizing that the last factor will be most influenced by the economy. Pension expense should be lower as a result of higher interest rates. These positive impacts will be partially offset by higher maintenance expense and more shares outstanding. We also expect lower earnings from the shutdown of our PUI business. The cost reduction actions implemented in 2012 and 2013 should provide benefits in 2014 and beyond.

**Outlook by Segment**

In Merchant Gases, volume growth will continue to be influenced by the economy. We have available capacity in each region and expect that an improving economy will increase loading on these assets and drive growth. We expect each region of the business to benefit from the 2013 cost reduction actions.

Tonnage Gases is expected to benefit from new plant onstreams supported by long-term take-or-pay contracts. However, we also expect higher planned plant maintenance costs from scheduled customer outages and the unfavorable impact of our exit from the PUI business.

**Table of Contents**

We expect that Electronics growth will begin to rebound in 2014 following a weak 2012 and 2013. Overall, we expect silicon growth of 3% 5% in 2014. Additionally, we expect the business to benefit from the 2013 cost reduction actions and product line restructuring. For Performance Materials, we anticipate typical seasonality in the first quarter of 2014, with volume growth improving due to a better economy.

Equipment and Energy results are expected to improve due to continued higher activity in our LNG equipment business. The above guidance should be read in conjunction with the section entitled Forward-Looking Statements.

**RESULTS OF OPERATIONS****Discussion of Consolidated Results**

	2013	2012	2011
Sales	\$10,180.4	\$9,611.7	\$9,673.7
Operating income GAAP Basis	1,324.4	1,282.4	1,508.1
Operating margin GAAP Basis	13.0%	13.3%	15.6%
Equity affiliates income	167.8	153.8	154.3
Operating income Non-GAAP Basis	1,566.1	1,533.7	1,556.6
Operating margin Non-GAAP Basis	15.4%	16.0%	16.1%

**Sales**

	% Change from Prior Year	
	2013	2012
Underlying business		
Volume	(1)%	1%
Price	%	%
Acquisitions	5%	2%
Energy and raw material cost pass-through	2%	(2)%
Currency	%	(2)%
<b>Total Consolidated Change</b>	<b>6%</b>	<b>(1)%</b>

**2013 vs. 2012**

Sales of \$10,180.4 increased 6%, or \$568.7. Underlying business decreased 1%, primarily due to lower volumes resulting from our previous decision to exit the PUI business and lower Electronics demand, partially offset by higher volumes in the Tonnage Gases, Performance Materials, and Equipment businesses. The acquisitions of Indura S.A. and DA NanoMaterials increased sales by 5%. Higher energy and raw material contractual cost pass-through to customers increased sales by 2%.

**2012 vs. 2011**

Sales of \$9,611.7 decreased 1%, or \$62.0. Underlying business increased 1%, primarily due to higher volumes in our Tonnage Gases segment, which were partially offset by lower volumes in the Merchant Gases segment, particularly in Europe. Acquisitions increased sales by 2%. Lower energy and raw material contractual cost pass-through to customers and currency both decreased sales by 2%.

**Operating Income****2013 vs. 2012**

Operating income of \$1,324.4 increased 3%, or \$42.0. Current year operating income included a charge of \$231.6 for a business restructuring and cost reduction plan and \$10.1 for advisory costs. Prior year operating income included a charge of \$327.4 for business restructuring and cost reduction plans, a \$9.8 charge for a customer bankruptcy, and the gain on the previously held equity interest in DA NanoMaterials of \$85.9. On a non-GAAP basis, operating income of \$1,566.1 increased 2%, or \$32.4. The increase was primarily due to acquisitions of \$54, higher volumes of \$24, and favorable currency translation and foreign exchange impacts of \$2, partially offset by \$40 from unfavorable higher energy and distribution costs net of pricing, and higher operating costs of \$20, including the impact from pensions. Operating income increased by \$12 from higher gains on the sale of assets and investments.





---

**Table of Contents**

**2012 vs. 2011**

Operating income of \$1,282.4 decreased 15%, or \$225.7. Operating income in 2012 includes a charge of \$327.4 for business restructuring and cost reduction plans, a \$9.8 charge for a customer bankruptcy, and the gain on the previously held equity interest in DA NanoMaterials of \$85.9. Operating income in 2011 includes a \$48.5 net loss related to the Airgas transaction. On a non-GAAP basis, operating income of \$1,533.7 decreased 1%, or \$22.9. The decrease was primarily due to unfavorable volumes, including acquisitions, of \$39 and unfavorable currency translation and foreign exchange impacts of \$30, partially offset by lower costs of \$31 and higher recovery of raw material costs in pricing of \$15. The decrease in volumes was primarily from lower Merchant Gases volumes and unfavorable volume mix due to lower LNG plant sales.

**Equity Affiliates Income**

**2013 vs. 2012**

Income from equity affiliates of \$167.8 increased \$14.0, primarily due to better performance in our Mexican equity affiliate.

**2012 vs. 2011**

Income from equity affiliates of \$153.8 decreased \$.5.

**Selling and Administrative Expense**

**2013 vs. 2012**

Selling and administrative expense of \$1,066.3 increased \$119.5, or 13%, primarily due to the acquisition of Indura S.A. Selling and administrative expense as a percent of sales increased to 10.5% from 9.9%, also due to Indura S.A.

**2012 vs. 2011**

Selling and administrative expense of \$946.8 increased \$5.1, or 1%, primarily due to acquisitions and inflation, partially offset by lower incentive compensation costs and favorable currency. Selling and administrative expense as a percent of sales increased to 9.9% from 9.7%.

**Research and Development**

**2013 vs. 2012**

Research and development expense of \$133.7 increased 6%, or \$7.3, primarily due to inflation and the acquisition of DA NanoMaterials. Research and development expense as a percent of sales was 1.3% in 2013 and 2012.

**2012 vs. 2011**

Research and development expense of \$126.4 increased 6%, or \$7.6, primarily due to the DA NanoMaterials acquisition. Research and development expense as a percent of sales increased to 1.3% from 1.2%.

**Business Restructuring and Cost Reduction Plans**

We recorded charges in 2013 and 2012 for business restructuring and cost reduction plans. The charges for these plans are reflected on the consolidated income statements as Business restructuring and cost reduction plans. The charges for these plans are excluded from segment operating income.

**2013 Plan**

During the fourth quarter of 2013, we recorded an expense of \$231.6 (\$157.9 after-tax, or \$.74 per share) reflecting actions to better align our cost structure with current market conditions. These charges include \$100.4 for asset actions and \$58.5 for the final settlement of a long-term take-or-pay silane contract primarily impacting the Electronics business due to continued weakness in the PV and light-emitting diode (LED)

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

markets. In addition, \$71.9 was recorded for severance, benefits, and other contractual obligations associated with the elimination of approximately 700 positions and executive changes. These charges primarily impact our Merchant Gases businesses and corporate functions. The actions are in response to weaker than expected business conditions in Europe and Asia, reorganization of our operations and functional areas, and previously announced senior executive changes. The planned actions are expected to be completed by the end of fiscal year 2014. We expect \$45 in savings in 2014. Beyond 2014, we expect these actions to provide approximately \$75 in annual savings.

### **2012 Plans**

In 2012, we recorded an expense of \$327.4 (\$222.4 after-tax, or \$1.03 per share) for business restructuring and cost reduction plans in our PUI, Electronics, and European Merchant businesses.

During the second quarter of 2012, we recorded an expense of \$86.8 (\$60.6 after-tax, or \$.28 per share) for actions to remove stranded costs resulting from our decision to exit the Homecare business, the reorganization of the

## **Table of Contents**

Merchant business, and actions taken to right size our European cost structure in light of the challenging economic outlook. The planned actions are complete and provided approximately \$60 in annual savings in 2013.

During the fourth quarter of 2012, we took actions in the PUI business to improve costs, resulting in a net expense of \$54.6 (\$34.8 after-tax, or \$.16 per share), and ultimately exit the business. Our PUI facility in Pasadena, Texas, is currently being dismantled, with completion expected in fiscal year 2014. The costs to dismantle are expensed as incurred and are reflected in continuing operations in the Tonnage Gases business segment.

During the fourth quarter of 2012, we completed an assessment of our position in the PV market, resulting in \$186.0 of expense (\$127.0 after-tax, or \$.59 per share) primarily related to the Electronics and Performance Materials business segment. Included in the charge was an accrual of \$93.5 for an offer that we made to terminate a long-term take-or-pay supply contract to purchase silane. As noted above, a final settlement was reached with the supplier in the fourth quarter of 2013.

Refer to Note 4, Business Restructuring and Cost Reduction Plans, to the consolidated financial statements for additional details on these actions.

## **Business Combinations**

### **2013 Business Combinations**

We completed three acquisitions in 2013. The acquisitions were accounted for as business combinations, and their results of operations were consolidated within their respective segments after the acquisition dates. The aggregate purchase price, net of cash acquired, for these acquisitions was \$233 and resulted in recognition of \$68 of goodwill, none of which is deductible for tax purposes.

On 30 August 2013, we acquired an air separation unit and integrated gases liquefier in Guiyang, China. This acquisition included a long-term sale of gas contract within our Tonnage Gases segment and provided our Merchant Gases segment with additional liquid capacity in the region. On 31 May 2013, we acquired EPCO Carbondioxide Products, Inc. (EPCO), the largest independent U.S. producer of liquid carbon dioxide (CO<sub>2</sub>). This acquisition expanded our North American offerings of bulk industrial process gases in the Merchant Gases business segment. On 1 April 2013, we acquired Wuxi Chem-Gas Company, Ltd. (WCG). This acquisition provided our Merchant Gases segment with additional gases presence in the Jiangsu Province of China.

### **2012 Business Combinations**

#### **Indura S.A.**

In July 2012, we acquired a 64.8% controlling equity interest in the outstanding shares of Indura S.A. Following the acquisition date, 100% of the Indura S.A. results are consolidated in our financial statements within the Merchant Gases business segment. The portion of the business that is not owned by the Company is recorded as noncontrolling interests. We paid cash consideration in Chilean pesos (CLP) of 345.5 billion (\$690) and assumed debt of CLP113.8 billion (\$227) for these interests. As of 30 September 2013, we hold a 67.2% interest.

Refer to Note 5, Business Combinations, to the consolidated financial statements for additional details on this transaction.

#### **DA NanoMaterials LLC**

On 2 April 2012, we closed on the acquisition agreement with E.I. DuPont de Nemours and Co., Inc. to acquire their 50% interest in our joint venture, DA NanoMaterials. Beginning in the third quarter of 2012, the results of DA NanoMaterials were consolidated within our Electronics and Performance Materials business segment.

Prior to the acquisition date, we accounted for our 50% interest in DA NanoMaterials as an equity-method investment. The year ended 30 September 2012 included a gain of \$85.9 (\$54.6 after-tax, or \$.25 per share) as a result of revaluing our previously held equity interest to fair market value as of the acquisition date. Refer to Note 5, Business Combinations, to the consolidated financial statements for additional details on this transaction.

#### **Net Loss on Airgas Transaction**

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

For the year ended 30 September 2011, \$48.5 (\$31.6 after-tax, or \$.14 per share) in net loss was recognized related to the Airgas transaction. Refer to Note 6, Airgas Transaction, to the consolidated financial statements for additional details.

### **Customer Bankruptcy**

As a result of events which occurred during the fourth quarter of 2012, we recognized a charge of \$9.8 (\$6.1 after-tax, or \$.03 per share) primarily related to the write-off of on-site assets due to a customer bankruptcy and mill

**Table of Contents**

shutdown. The customer, which primarily received products from the Tonnage Gases segment, filed for bankruptcy in May 2012 and announced the mill shutdown in August 2012.

**Pension Settlement Loss**

Our U.S. supplemental pension plan provides for a lump sum benefit payment option at the time of retirement, or for corporate officers, six months after the retirement date. Pension settlements are recognized when cash payments exceed the sum of the service and interest cost components of net periodic pension cost of the plan for the fiscal year. The participant's vested benefit is considered fully settled upon cash payment of the lump sum. We recognized \$12.4 of settlement charges in 2013.

**Advisory Costs**

During the fourth quarter of 2013, we incurred legal and other advisory fees of \$10.1 (\$6.4 after-tax, or \$.03 per share) in connection with our response to the rapid acquisition of a large position in shares of our common stock by Pershing Square Capital Management LLC and its affiliates (Pershing Square). These fees, which are reflected on the consolidated income statements as Advisory costs, include costs incurred before and after Pershing Square's disclosure of its holdings and cover advisory services related to the adoption of the Shareholders Rights Plan, preparation for a potential proxy solicitation campaign, and entering into an agreement with Pershing Square.

**Other Income (Expense), Net**

Items recorded to other income (expense), net arise from transactions and events not directly related to our principal income earning activities. The detail of other income (expense), net is presented in Note 23, Supplemental Information, to the consolidated financial statements.

**2013 vs. 2012**

Other income (expense), net of \$70.2 increased \$23.1, primarily due to higher gains from the sale of a number of small assets and investments and a favorable commercial contract settlement, partially offset by lower government grants. Otherwise, no individual items were significant in comparison to the prior year.

**2012 vs. 2011**

Other income (expense), net of \$47.1 increased \$5.4, primarily due to favorable foreign exchange and reimbursements from government grants for expense, partially offset by lower gains from the sale of assets. Otherwise, no individual items were significant in comparison to the prior year.

**Interest Expense**

	2013	2012	2011
Interest incurred	\$167.6	\$153.9	\$138.2
Less: Capitalized interest	25.8	30.2	22.7
<b>Interest Expense</b>	<b>\$141.8</b>	<b>\$123.7</b>	<b>\$115.5</b>

**2013 vs. 2012**

Interest incurred increased \$13.7. The increase was driven primarily by a higher average debt balance for \$41, partially offset by a lower average interest rate on the debt portfolio of \$24. The change in capitalized interest was driven by a decrease in project spending and a lower average interest rate.

**2012 vs. 2011**

Interest incurred increased \$15.7. The increase was driven primarily by a higher average debt balance and debt issuance costs related to the Indura S.A. acquisition, partially offset by the impact of a stronger dollar on the translation of foreign currency interest. The change in capitalized interest was driven by an increase in project spending which qualified for capitalization.

**Effective Tax Rate**

The effective tax rate equals the income tax provision divided by income from continuing operations before taxes. Refer to Note 22, Income Taxes, to the consolidated financial statements for details on factors affecting the effective tax rate.

**2013 vs. 2012**

On a GAAP basis, the effective tax rate was 22.8% and 21.9% in 2013 and 2012, respectively. The current year rate includes income tax benefits of \$73.7 related to the business restructuring and cost reduction plans and \$3.7 for the advisory costs. The prior year rate includes income tax benefits of \$105.0 related to the business restructuring and cost reduction plans, \$58.3 related to the second quarter Spanish tax ruling, and \$3.7 related to the customer

**Table of Contents**

bankruptcy charge, offset by income tax expense of \$43.8 related to the first quarter Spanish tax settlement and \$31.3 related to the gain on the previously held equity interest in DA NanoMaterials. Refer to Note 4, Business Restructuring and Cost Reduction Plans; Note 5, Business Combinations; Note 22, Income Taxes; and Note 23, Supplemental Information, to the consolidated financial statements for details on these transactions. On a non-GAAP basis, the effective tax rate was 24.2% in both 2013 and 2012.

**2012 vs. 2011**

On a GAAP basis, the effective tax rate was 21.9% and 24.3% in 2012 and 2011, respectively. The tax rate in 2012 includes income tax benefits of \$105.0 related to the business restructuring and cost reduction plans, \$58.3 related to the second quarter Spanish tax ruling, and \$3.7 related to the customer bankruptcy charge, offset by income tax expense of \$43.8 related to the first quarter Spanish tax settlement and \$31.3 related to the gain on the previously held equity interest in DA NanoMaterials. Refer to Note 4, Business Restructuring and Cost Reduction Plans; Note 5, Business Combinations; Note 22, Income Taxes; and Note 23, Supplemental Information, to the consolidated financial statements for details on these transactions. The tax rate in 2011 includes an income tax benefit of \$16.9 related to the Airgas transaction. Refer to Note 6, Airgas Transaction, to the consolidated financial statements for details on this transaction. On a non-GAAP basis, the effective tax rate was 24.2% and 24.6% in 2012 and 2011, respectively.

**Discontinued Operations**

During the second quarter of 2012, the Board of Directors authorized the sale of our Homecare business, which had previously been reported as part of the Merchant Gases operating segment.

On 30 April 2012, we sold the majority of our Homecare business to The Linde Group for sale proceeds of \$590 million (\$777) and recognized a gain of \$207.4 (\$150.3 after-tax, or \$.70 per share). During the third quarter of 2012, an impairment charge of \$33.5 (\$29.5 after-tax, or \$.14 per share) was recorded to write down the remaining business, which is primarily in the United Kingdom and Ireland, to its estimated net realizable value. In the fourth quarter of 2013, we recorded an additional charge of \$18.7 (\$13.6 after-tax, or \$.06 per share) to update our estimate of the net realizable value as we continue to market the business for sale.

Refer to Note 3, Discontinued Operations, to the consolidated financial statements for additional details on this business.

**Segment Analysis****Merchant Gases**

	2013	2012	2011
Sales	\$4,098.6	\$3,662.4	\$3,664.9
Operating income	680.5	644.0	668.9
Operating margin	16.6%	17.6%	18.3%
Equity affiliates income	145.0	137.1	134.6

**Merchant Gases Sales**

	% Change from Prior Year	
	2013	2012
Underlying business		
Volume	%	(2)%
Price	1%	1%
Acquisition	11%	4%
Currency	%	(3)%
<b>Total Merchant Gases Sales Change</b>	<b>12%</b>	<b>%</b>

**2013 vs. 2012**

Underlying sales increased 1% due to higher pricing of 1%. The acquisition of Indura S.A. had a favorable impact on sales of 11%.

In the U.S. and Canada, sales increased 5%, with volumes up 2% and price up 3%. Volumes increased primarily due to higher liquid oxygen and liquid nitrogen, partially offset by helium supply limitations. In Europe, sales decreased 3%, with volumes down 3% primarily due to overall economic weakness in the region. In Asia, sales increased 3% due to higher volumes of 2% and favorable currency of 2%, partially offset by

lower pricing of 1%. Volumes increased primarily due to higher liquid oxygen and liquid nitrogen volumes.



**Table of Contents**

Operating income increased 6%, primarily due to higher acquisitions of \$48 and lower operating costs of \$13, partially offset by lower price recovery of power and fuel costs of \$25 and lower volumes of \$10. The lower operating costs included the impact from the prior year cost reduction plan in Europe, partially offset by higher pension costs. Operating income in the current year also included \$10 for gains from sales of assets and investments. Operating margin decreased 100 basis points (bp) from prior year, primarily due to the impact of the Indura S.A. acquisition and higher power and fuel costs.

Merchant Gases equity affiliates income of \$145.0 increased \$7.9, primarily as a result of improved performance in our Mexican equity affiliate.

**2012 vs. 2011**

Underlying sales decreased 1% due to lower volumes of 2% and higher pricing of 1%. Volumes decreased due to lower demand in North America and Europe. The acquisition of Indura S.A. had a favorable impact on sales of 4%. Currency had an unfavorable impact on sales of 3%.

In the U.S. and Canada, sales decreased 1%, with volumes down 2% and price up 1%. Volumes were down due to declines in argon and helium volumes from limitations in supply. In Europe, sales decreased 8%, with unfavorable currency impacts of 6% and volumes down 4%, partially offset by higher price of 2%. Volumes were down primarily due to overall economic weakness in the region. In Asia, sales increased 2% due to higher volumes of 1% and higher pricing of 1%.

Operating income decreased 4%, primarily due to lower volumes, including acquisitions, of \$47 and unfavorable currency of \$15, partially offset by higher recovery of raw material costs in pricing of \$23 and lower operating costs of \$14. Operating margin decreased 70 bp from prior year, primarily due to lower volumes and the impact of the Indura S.A. acquisition.

Merchant Gases equity affiliates income of \$137.1 increased \$2.5, primarily as a result of improved performance in our Mexican equity affiliate.

**Tonnage Gases**

	2013	2012	2011
Sales	\$3,387.3	\$3,206.7	\$3,316.7
Operating income	515.9	512.0	503.1
Operating margin	15.2%	16.0%	15.2%

**Tonnage Gases Sales**

	% Change from Prior Year	
	2013	2012
Underlying business		
Volume	(1)%	5%
Energy and raw material cost pass-through	6%	(7)%
Currency	1%	(1)%
<b>Total Tonnage Gases Sales Change</b>	<b>6%</b>	<b>(3)%</b>

**2013 vs. 2012**

Volumes decreased 1%, as the impact from implementation of our previous decision to exit the PUI business was partially offset by the impact of new plants. Higher energy and raw material contractual cost pass-through to customers increased sales by 6%. Currency favorably impacted sales by 1%.

Operating income increased as higher volumes of \$22 and favorable currency of \$3 were partially offset by higher costs of \$21, including higher maintenance and pension costs. Operating margin decreased 80 bp from prior year, primarily due to the higher energy cost pass-through and higher costs, partially offset by the higher volumes from new plants.

**2012 vs. 2011**

Volumes increased 5%, driven by improvement in existing customer loadings and new plants. Lower natural gas prices resulted in lower energy and raw material contractual cost pass-through to customers, decreasing sales by 7%. Currency unfavorably impacted sales by 1%.

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Operating income increased as higher volumes of \$33 were partially offset by higher costs of \$17 and unfavorable currency of \$7. Operating margin increased 80 bp from prior year, primarily due to higher volumes.

**Table of Contents****Electronics and Performance Materials**

	2013	2012	2011
Sales	\$2,243.4	\$2,322.5	\$2,291.5
Operating income GAAP basis	321.3	425.6	361.1
Operating margin GAAP basis	14.3%	18.3%	15.8%
Operating income Non-GAAP basis	321.3	339.7	361.1
Operating margin Non-GAAP basis	14.3%	14.6%	15.8%

**Electronics and Performance Materials Sales**

	% Change from Prior Year	
	2013	2012
Underlying business		
Volume	(4)%	(1)%
Price	(1)%	%
Acquisitions	2%	3%
Currency	%	(1)%
<b>Total Electronics and Performance Materials Sales Change</b>	<b>(3)%</b>	<b>1%</b>

**2013 vs. 2012**

Sales decreased 3%, as lower volumes of 4% and lower pricing of 1% were partially offset by acquisitions of 2%. Electronics sales decreased 8%, as weaker materials volumes and equipment sales were partially offset by the acquisition of DA NanoMaterials. Performance Materials sales increased 2%, as higher volumes of 4% were partially offset by lower pricing of 2%. The increase in volumes was primarily due to strength in the automobile and U.S. housing markets partially offset by weaker volumes to certain construction markets and marine coatings. The lower pricing was primarily due to unfavorable mix impacts.

Operating income of \$321.3 decreased 25%, or \$104.3, and operating margin of 14.3% decreased 400 bp, as the prior year included a gain on the previously held equity interest in DA NanoMaterials of \$85.9. On a non-GAAP basis, operating income of \$321.3 decreased 5%, or \$18.4, primarily from unfavorable price and mix impacts of \$15, lower volumes of \$9, and higher operating costs of \$4 partially offset by higher acquisitions of \$6 and favorable currency of \$4. Operating margin decreased 30 bp, primarily due to lower volumes and unfavorable price mix.

**2012 vs. 2011**

Sales increased 1%, as acquisitions of 3% were partially offset by lower volumes of 1% and unfavorable currency of 1%. Electronics sales increased 3%, as the acquisition of DA NanoMaterials was partially offset by lower volumes of 2% and unfavorable currency of 1%. Performance Materials sales decreased 1%, as lower pricing of 1% and unfavorable currency of 1% were partially offset by higher volumes of 1%.

Operating income of \$425.6 increased 18%, or \$64.5, and operating margin of 18.3% increased 250 bp. Operating income in 2012 includes the gain on the previously held equity interest in DA NanoMaterials of \$85.9. On a non-GAAP basis, operating income of \$339.7 decreased 6%, or \$21.4, primarily from unfavorable currency of \$17 and lower recovery of raw material costs in pricing of \$8, partially offset by lower operating costs of \$3 and higher volumes, including acquisitions, of \$1. Operating margin decreased 120 bp, primarily due to currency and volume mix.

**Table of Contents****Equipment and Energy**

	<b>2013</b>	2012	2011
Sales	<b>\$451.1</b>	\$420.1	\$400.6
Operating income	<b>65.5</b>	44.6	62.8

**2013 vs. 2012**

Sales of \$451.1 increased primarily from higher LNG project activity. Operating income of \$65.5 increased from the higher LNG project activity.

The sales backlog for the Equipment business at 30 September 2013 was \$402, compared to \$450 at 30 September 2012. It is expected that approximately \$250 of the backlog will be completed during 2014.

**2012 vs. 2011**

Sales of \$420.1 increased 5%, or \$19.5, reflecting higher air separation unit (ASU) activity. Operating income of \$44.6 decreased 29%, or \$18.2, reflecting lower LNG project activity.

The sales backlog for the Equipment business at 30 September 2012 was \$450, compared to \$334 at 30 September 2011.

**Other**

Other operating income (loss) primarily includes other expense and income that cannot be directly associated with the business segments, including foreign exchange gains and losses. Also included are LIFO inventory valuation adjustments, as the business segments use FIFO, and the LIFO pool valuation adjustments are not allocated to the business segments. Other also included stranded costs resulting from discontinued operations, as these costs were not reallocated to the businesses in 2012.

**2013 vs. 2012**

Other operating loss was \$4.7, compared to \$6.6 in the prior year. The current year includes an unfavorable LIFO adjustment versus the prior year of \$11. The prior year loss included stranded costs from discontinued operations of \$10.

**2012 vs. 2011**

Other operating loss was \$6.6, compared to \$39.3 in the prior year, primarily due to a reduction in stranded costs, a decrease in the LIFO adjustment as a result of decreases in inventory values, and favorable foreign exchange, partially offset by gains on asset sales in the prior year.

**Table of Contents****RECONCILIATION OF NON-GAAP FINANCIAL MEASURES**

The discussion of our annual results includes comparisons to non-GAAP financial measures. The presentation of non-GAAP measures is intended to enhance the usefulness of financial information by removing certain items which management does not believe to be indicative of on-going business trends and allow evaluation of our baseline performance on a comparable basis. Definitions of these non-GAAP measures may not be comparable to similar definitions used by other companies and are not a substitute for similar GAAP measures. Presented below are reconciliations of the reported GAAP results to the non-GAAP measures.

**CONSOLIDATED RESULTS**

	<b>Continuing Operations</b>					
	Operating Income	Operating Margin (A)	Income	Diluted EPS	Net Income	Diluted EPS
<b>2013 GAAP</b>	<b>\$1,324.4</b>	<b>13.0%</b>	<b>\$1,004.2</b>	<b>\$4.73</b>	<b>\$994.2</b>	<b>\$4.68</b>
<b>2012 GAAP</b>	<b>1,282.4</b>	<b>13.3%</b>	<b>999.2</b>	<b>4.66</b>	<b>1,167.3</b>	<b>5.44</b>
Change GAAP	\$42.0	(30bp)	\$5.0	\$.07	(173.1)	(.76)
% Change GAAP	3%		1%	2%	(15)%	(14)%
<b>2013 GAAP</b>	<b>\$1,324.4</b>	<b>13.0%</b>	<b>\$1,004.2</b>	<b>\$4.73</b>	<b>\$994.2</b>	<b>\$4.68</b>
Business restructuring and cost reduction plans (tax impact \$73.7)	231.6	2.3%	157.9	.74	157.9	.74
Advisory costs (tax impact \$3.7)	10.1	.1%	6.4	.03	6.4	.03
<b>2013 Non-GAAP Measure</b>	<b>\$1,566.1</b>	<b>15.4%</b>	<b>\$1,168.5</b>	<b>\$5.50</b>	<b>\$1,158.5</b>	<b>\$5.45</b>
<b>2012 GAAP</b>	<b>\$1,282.4</b>	<b>13.3%</b>	<b>\$999.2</b>	<b>\$4.66</b>	<b>\$1,167.3</b>	<b>\$5.44</b>
Business restructuring and cost reduction plans (tax impact \$105.0)	327.4	3.5%	222.4	1.03	222.4	1.03
Customer bankruptcy (tax impact \$3.7)	9.8	.1%	6.1	.03	6.1	.03
Gain on previously held equity interest (tax impact \$31.3)	(85.9)	(.9)%	(54.6)	(.25)	(54.6)	(.25)
Q1 Spanish tax settlement		%	43.8	.20	43.8	.20
Q2 Spanish tax ruling		%	(58.3)	(.27)	(58.3)	(.27)
<b>2012 Non-GAAP Measure</b>	<b>\$1,533.7</b>	<b>16.0%</b>	<b>\$1,158.6</b>	<b>\$5.40</b>	<b>\$1,326.7</b>	<b>\$6.18</b>
Change Non-GAAP Measure	\$32.4	(60bp)	\$9.9	\$.10		
% Change Non-GAAP Measure	2%		1%	2%		

	<b>Continuing Operations</b>					
	Operating Income	Operating Margin (A)	Income	Diluted EPS	Net Income	Diluted EPS
<b>2012 GAAP</b>	<b>\$1,282.4</b>	<b>13.3%</b>	<b>\$999.2</b>	<b>\$4.66</b>	<b>\$1,167.3</b>	<b>\$5.44</b>
<b>2011 GAAP</b>	<b>1,508.1</b>	<b>15.6%</b>	<b>1,134.3</b>	<b>5.22</b>	<b>1,224.2</b>	<b>5.63</b>
Change GAAP	\$(225.7)	(230bp)	\$(135.1)	\$(-.56)	\$(56.9)	\$(-.19)
% Change GAAP	(15)%		(12)%	(11)%	(5)%	(3)%
<b>2012 Non-GAAP Measure</b>	<b>\$1,533.7</b>	<b>16.0%</b>	<b>\$1,158.6</b>	<b>\$5.40</b>	<b>\$1,326.7</b>	<b>\$6.18</b>
2011 GAAP	\$1,508.1	15.6%	\$1,134.3	\$5.22	\$1,224.2	\$5.63
Net loss on Airgas transaction (tax impact \$16.9)	48.5	.5%	31.6	.14	31.6	.14
<b>2011 Non-GAAP Measure</b>	<b>\$1,556.6</b>	<b>16.1%</b>	<b>\$1,165.9</b>	<b>\$5.36</b>	<b>\$1,255.8</b>	<b>\$5.77</b>
Change Non-GAAP Measure	\$(22.9)	(10bp)	\$(7.3)	\$.04		
% Change Non-GAAP Measure	(1)%		(1)%	1%		

**Table of Contents****ELECTRONICS AND PERFORMANCE MATERIALS**

	YTD Operating Income	YTD Operating Margin (A)
<b>2013 GAAP</b>	<b>\$321.3</b>	<b>14.3%</b>
<b>2012 GAAP</b>	<b>425.6</b>	<b>18.3%</b>
Change GAAP	\$(104.3)	(400bp)
% Change GAAP	(25)%	
2013 GAAP	\$321.3	14.3%
<b>2013 Non-GAAP Measure</b>	<b>\$321.3</b>	<b>14.3%</b>
2012 GAAP	\$425.6	18.3%
Gain on previously held equity interest	(85.9)	(3.7)%
<b>2012 Non-GAAP Measure</b>	<b>\$339.7</b>	<b>14.6%</b>
Change Non-GAAP Measure	\$(18.4)	(30bp)
% Change Non-GAAP Measure	(5)%	

	YTD Operating Income	YTD Operating Margin (A)
<b>2012 GAAP</b>	<b>\$425.6</b>	<b>18.3%</b>
<b>2011 GAAP</b>	<b>361.1</b>	<b>15.8%</b>
Change GAAP	\$64.5	250bp
% Change GAAP	18%	
<b>2012 Non-GAAP Measure</b>	<b>\$339.7</b>	<b>14.6%</b>
2011 GAAP	\$361.1	15.8%
<b>2011 Non-GAAP Measure</b>	<b>\$361.1</b>	<b>15.8%</b>
Change Non-GAAP Measure	\$(21.4)	(120bp)
% Change Non-GAAP Measure	(6)%	

**Table of Contents****INCOME TAXES**

	Effective Tax Rate		
	2013	2012	2011
<b>Income Tax Provision GAAP</b>	<b>\$307.9</b>	<b>\$287.3</b>	<b>\$375.3</b>
<b>Income from continuing operations before taxes GAAP</b>	<b>\$1,350.4</b>	<b>\$1,312.5</b>	<b>\$1,546.9</b>
<b>Effective Tax Rate GAAP</b>	<b>22.8%</b>	<b>21.9%</b>	<b>24.3%</b>
Income Tax Provision GAAP	\$307.9	\$287.3	\$375.3
Business restructuring and cost reduction plans tax impact	73.7	105.0	
Customer bankruptcy tax impact		3.7	
Gain on previously held equity interest tax impact		(31.3)	
Q1 Spanish tax settlement		(43.8)	
Q2 Spanish tax ruling		58.3	
Net loss on Airgas transaction tax impact			16.9
Advisory costs tax impact	3.7		
<b>Income Tax Provision Non-GAAP Measure</b>	<b>\$385.3</b>	<b>\$379.2</b>	<b>\$392.2</b>
<b>Income from continuing operations before taxes GAAP</b>	<b>\$1,350.4</b>	<b>\$1,312.5</b>	<b>\$1,546.9</b>
Business restructuring and cost reduction plans	231.6	327.4	
Customer bankruptcy		9.8	
Gain on previously held equity interest		(85.9)	
Net loss on Airgas transaction			48.5
Advisory costs	10.1		
<b>Income from Continuing Operations Before Taxes Non-GAAP Measure</b>	<b>\$1,592.1</b>	<b>\$1,563.8</b>	<b>\$1,595.4</b>
<b>Effective Tax Rate Non-GAAP Measure</b>	<b>24.2%</b>	<b>24.2%</b>	<b>24.6%</b>

(A) Operating margin is calculated by dividing operating income by sales.

**LIQUIDITY AND CAPITAL RESOURCES**

We maintained a strong financial position throughout 2013. We continue to have consistent access to commercial paper markets, and cash flows from operations and financing activities are expected to meet liquidity needs for the foreseeable future.

As of 30 September 2013, we had \$438.3 of foreign cash and cash items compared to a total amount of cash and cash items of \$450.4. If the foreign cash and cash items are needed for operations in the U.S. or we otherwise elect to repatriate the funds, we may be required to accrue and pay U.S. taxes on a significant portion of these amounts. However, since we have significant current investment plans outside the U.S., it is our intent to permanently reinvest the majority of our foreign cash and cash items outside the U.S. Current financing alternatives do not require the repatriation of foreign funds.

Our cash flows from operating, investing, and financing activities of continuing operations, as reflected in the consolidated statements of cash flows, are summarized in the following table:

	2013	2012	2011
<b>Cash provided by (used for)</b>			
Operating activities	<b>\$1,553.1</b>	\$1,765.1	\$1,710.4
Investing activities	<b>(1,697.0)</b>	(2,435.2)	(1,169.8)
Financing activities	<b>115.4</b>	(78.4)	(484.6)
<b>Operating Activities</b>			

For the year ended 2013, cash provided by operating activities was \$1,553.1. Income from continuing operations of \$1,004.2 reflected the write-down of long-lived assets associated with business restructuring of \$100.4. Income from continuing operations is adjusted for other non-cash items that include depreciation and amortization, undistributed earnings of equity affiliates, share-based compensation expense, and noncurrent capital lease receivables. The Other adjustments included a use of cash of \$300.8 for pension contributions, partially offset by \$178.2 of pension and other postretirement expense. The working capital accounts were a use of cash of \$207.8. The reduction of accrued liabilities of \$130.3 includes \$185.8 for payments made in relation to the prior year cost reduction and





**Table of Contents**

business restructuring actions, including the settlement of a long-term take-or-pay silane contract. The current year payments were partially offset by a \$69.7 net increase to accrued liabilities for the current year cost reduction and business restructuring actions.

For the year ended 2012, cash provided by operating activities was \$1,765.1. Income from continuing operations of \$999.2 reflected the non-cash gain on the previously held equity interest in DA NanoMaterials of \$85.9, the write-down of long-lived assets associated with restructuring and a customer bankruptcy of \$80.2, and a non-cash tax benefit of \$58.3 recognized as a result of the second quarter Spanish tax ruling. The working capital accounts were a source of cash of \$100.1. The provision for the cost reduction and business restructuring plans resulted in an increase to accrued liabilities of \$223.9, partially offset by a use of cash of \$32.9 for payments made in relation to these plans.

For the year ended 2011, cash provided by operating activities was \$1,710.4. Income from continuing operations of \$1,134.3 reflected the non-cash net loss of \$48.5 related to the Airgas transaction. We also made cash payments of \$156.2 related to the Airgas transaction. The working capital accounts were a use of cash of \$114.6, including \$107.5 for an increase in inventory primarily to support growth in our Performance Materials business.

**Investing Activities**

For the year ended 30 September 2013, cash used for investing activities was \$1,697.0, primarily driven by capital expenditures for plant and equipment and acquisitions. For the year ended 30 September 2012, cash used for investing activities was \$2,435.2, primarily driven by capital expenditures for plant and equipment, acquisitions, and investments in unconsolidated affiliates. Refer to the Capital Expenditures section below for additional detail.

For the year ended 30 September 2011, cash used for investing activities was \$1,169.8, primarily driven by capital expenditures for plant and equipment. We received proceeds of \$94.7 from the sale of approximately 1.5 million shares of Airgas stock. Refer to Note 6, Airgas Transaction, to the consolidated financial statements for additional information regarding this transaction.

**Capital Expenditures**

Capital expenditures are detailed in the following table:

	2013	2012	2011
Additions to plant and equipment	\$1,524.2	\$1,521.0	\$1,309.3
Acquisitions, less cash acquired	224.9	863.4	10.8
Investments in and advances to unconsolidated affiliates	(1.3)	175.4	45.8
<b>Capital Expenditures on a GAAP Basis</b>	<b>\$1,747.8</b>	<b>\$2,559.8</b>	<b>\$1,365.9</b>
Capital lease expenditures <sup>(A)</sup>	234.9	212.2	173.5
Noncurrent liability related to purchase of shares from noncontrolling interests <sup>(A)</sup>	14.0	6.3	
<b>Capital Expenditures on a Non-GAAP Basis</b>	<b>\$1,996.7</b>	<b>\$2,778.3</b>	<b>\$1,539.4</b>

<sup>(A)</sup> We utilize a non-GAAP measure in the computation of capital expenditures and include spending associated with facilities accounted for as capital leases and purchases of noncontrolling interests. Certain contracts associated with facilities that are built to provide product to a specific customer are required to be accounted for as leases, and such spending is reflected as a use of cash within cash provided by operating activities, if the arrangement qualifies as a capital lease. Additionally, the purchase of noncontrolling interests in a subsidiary is accounted for as an equity transaction and will be reflected as a financing activity in the statement of cash flows. The presentation of this non-GAAP measure is intended to enhance the usefulness of information by providing a measure that our management uses internally to evaluate and manage our expenditures.

Capital expenditures on a GAAP basis in 2013 totaled \$1,747.8, compared to \$2,559.8 in 2012, resulting in a decrease of \$812.0, primarily due to the acquisition of Indura S.A. in 2012. Additions to plant and equipment are largely in support of the Merchant Gases and Tonnage Gases businesses. Additions to plant and equipment also included support capital of a routine, ongoing nature, including expenditures for distribution equipment and facility improvements. Spending in 2013 included plant and equipment constructed to provide oxygen for coal gasification in China, hydrogen to the global market, and renewable energy in the U.K.

In 2013, we completed three acquisitions with an aggregate cash use, net of cash acquired, of \$224.9. In the fourth quarter, we acquired an air separation unit and integrated gases liquefier in Guiyang, China. During the third quarter, we acquired EPCO, the largest independent U.S. producer of liquid carbon dioxide (CO<sub>2</sub>), and WCG.

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

In 2012, we acquired a controlling stake in Indura S.A. for \$690 and E.I. DuPont de Nemours and Co., Inc.'s 50% interest in our joint venture, DA NanoMaterials for \$147. We also purchased a 25% equity interest in Abdullah Hashim Industrial Gases & Equipment Co. Ltd. (AHG), an unconsolidated affiliate, for \$155 in the third quarter.

---

## **Table of Contents**

Refer to Note 5, Business Combinations, and Note 8, Summarized Financial Information of Equity Affiliates, to the consolidated financial statements for additional details regarding the acquisitions and the investment in AHG.

Capital expenditures on a non-GAAP basis in 2013 totaled \$1,996.7 compared to \$2,778.3 in 2012. Capital lease expenditures of \$234.9 increased by \$22.7, reflecting higher project spending.

### **2014 Outlook**

Excluding acquisitions, capital expenditures for new plant and equipment in 2014 on a GAAP basis are expected to be between \$1,800 and \$1,900, and on a non-GAAP basis are expected to be between \$1,900 and \$2,100. The non-GAAP capital expenditures include spending associated with facilities accounted for as capital leases, which are expected to be between \$100 and \$200. The majority of spending is expected in the Tonnage Gases segment, with approximately \$1,000 expected for new plants. It is anticipated that capital expenditures will be funded principally with cash from continuing operations. In addition, we intend to continue to evaluate acquisition opportunities and investments in equity affiliates.

### **Financing Activities**

For the year ended 2013, cash provided by financing activities was \$115.4. Our borrowings (short- and long-term proceeds, net of repayments) were a net source of cash (issuance) of \$927.4 and included \$437.7 of net commercial paper and other short-term debt issuances and the issuances of a 300 million (\$397) 2.0% Eurobond on 7 August 2013, and a \$400.0 senior fixed-rate 2.75% note on 4 February 2013, which were partially offset by the repayment of a \$300.0 senior fixed-rate 4.15% note on 1 February 2013. Proceeds from stock option exercises provided cash of \$226.4. The primary uses of cash were to purchase 5.7 million shares of treasury stock for \$461.6 and to pay dividends of \$565.6.

For the year ended 2012, cash used for financing activities was \$78.4. Our borrowings (short- and long-term proceeds, net of repayments) were a net source of cash (issuance) of \$419.6 and included the issuances of a \$400.0 senior fixed-rate 3.0% note on 3 November 2011 and a \$400.0 senior fixed-rate 1.2% note on 13 September 2012, which were partially offset by the repayment of a 4.25% Eurobond of \$400.3 on 10 April 2012. Proceeds from stock option exercises provided an additional \$124.3 source of funds. Dividends paid to shareholders were a use of cash of \$514.9.

For the year ended 2011, cash used for financing activities was \$484.6. Our borrowings (short- and long-term proceeds, net of repayments) were a net source of cash (issuance) of \$457.0 and included \$234.3 of net commercial paper and other short-term debt issuances as well as a \$350.0 senior fixed-rate 2.0% note, which were partially offset by \$156.0 in U.S. medium-term note maturities. Proceeds from stock option exercises provided an additional \$148.2 source of funds. Dividends paid to shareholders and the purchase of 7.4 million treasury shares were uses of cash of \$456.7 and \$649.2, respectively.

### **Discontinued Operations**

For the year ended 2013, cash provided by discontinued operations was \$13.1. For the year ended 2012, the sale of our European Homecare business to The Linde Group generated proceeds of \$776.6 and is included in discontinued operations in the consolidated statements of cash flows. Refer to Note 3, Discontinued Operations, to the consolidated financial statements for additional information.

### **Financing and Capital Structure**

Capital needs in 2013 were satisfied primarily with cash from operations and the issuance of debt. At the end of 2013, total debt outstanding was \$6,273.6 compared to \$5,291.9 at the end of 2012, and cash and cash items were \$450.4 compared to \$454.4 at the end of 2012. Total debt at 30 September 2013 and 2012, expressed as a percentage of total capitalization (total debt plus total equity plus redeemable noncontrolling interest) was 45.3% and 43.0%, respectively.

Proceeds from long-term debt were \$927.2. This included the issuance of a \$400.0 senior fixed-rate 2.75% note on 4 February 2013 that matures on 3 February 2023, and a 300 million (\$397) 2.0% Eurobond was issued on 7 August 2013 that matures on 7 August 2020; both were issued for general corporate purposes. Refer to Note 15, Debt, to the consolidated financial statements for additional information.

On 30 April 2013, we entered into a five-year \$2,500.0 revolving credit agreement with a syndicate of banks (the 2013 Credit Agreement), under which senior unsecured debt is available to both the Company and certain of its subsidiaries. The 2013 Credit Agreement provides a source of liquidity for the Company and supports its commercial paper program. We entered into this agreement to increase the previously existing facility by \$330.0, extend the maturity date to 30 April 2018, and modify the financial covenant. The Company's only financial covenant is a



**Table of Contents**

maximum ratio of total debt to total capitalization of 70%. No borrowings were outstanding under the 2013 Credit Agreement as of 30 September 2013.

The 2013 Credit Agreement terminates and replaces the Company's \$2,170.0 revolving credit agreement dated 8 July 2010, as subsequently amended, which was to mature 30 June 2015 and had a financial covenant of long-term debt divided by the sum of long-term debt plus equity of no greater than 60%. No borrowings were outstanding under the previous agreement at the time of its termination, and no early termination penalties were incurred.

Effective 11 June 2012, we entered into an offshore Chinese Renminbi (RMB) syndicated credit facility of RMB1,000.0 million (\$163.5), maturing in June 2015. There are RMB250.0 million (\$40.9) in outstanding borrowings under this commitment at 30 September 2013. Additional commitments totaling \$383.0 are maintained by our foreign subsidiaries, of which \$309.0 was borrowed and outstanding at 30 September 2013.

An acquisition financing facility was arranged with Banco Santander, Chile to provide the initial financing required for the Indura S.A. business combination. This was a Chilean Peso (CLP) committed credit facility with a total commitment amount of CLP390 billion (\$778). Of this facility, CLP347 billion (\$693) was drawn on 3 July 2012 to fund the business combination and related expenses, and the balance of the commitment was cancelled. This facility was fully repaid on 2 August 2012, primarily with proceeds from U.S. commercial paper issuance. A portion of this commercial paper was subsequently refinanced with the \$400.0 senior fixed-rate 1.2% note issued on 13 September 2012 that matures on 15 October 2017.

As of 30 September 2013, we are in compliance with all of the financial and other covenants under our debt agreements.

As of 30 September 2013, we classified \$400.0 of commercial paper as long-term debt because we have the ability to refinance the debt under our \$2,500.0 committed credit facility maturing in 2018. Our current intent is to refinance this debt via the U.S. public or private placement markets.

On 15 September 2011, the Board of Directors authorized the repurchase of up to \$1,000 of our outstanding common stock. During fiscal year 2013, 5.7 million of our outstanding shares were purchased at a cost of \$461.6. At 30 September 2013, \$485.3 in share repurchase authorization remains.

**2014 Outlook**

Cash flows from operations and financing activities are expected to meet liquidity needs for the foreseeable future. We project a modest need to access the long-term debt markets in 2014, primarily to refinance commercial paper. We expect that we will continue to be in compliance with all of our financial covenants. Also, we anticipate that we will continue to be able to access the commercial paper and other short-term debt markets.

**Dividends**

On 21 March 2013, the Board of Directors increased the quarterly cash dividend from \$.64 per share to \$.71 per share. Dividends are declared by the Board of Directors and are usually paid during the sixth week after the close of the fiscal quarter.

**CONTRACTUAL OBLIGATIONS**

We are obligated to make future payments under various contracts, such as debt agreements, lease agreements, unconditional purchase obligations, and other long-term obligations. The following table summarizes our obligations as of 30 September 2013:

	Total	Payments Due By Period					Thereafter
		2014	2015	2016	2017	2018	
Long-term debt obligations							
Debt maturities	\$5,564	\$907	\$453	\$433	\$454	\$440	\$2,877
Contractual interest	714	126	111	99	79	62	237
Capital leases	2	1	1				

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Operating leases	286	69	50	36	25	20	86
Pension obligations	593	95	85	95	100	100	118
Unconditional purchase obligations	1,470	821	104	104	80	65	296
Discontinued operations	148	148					
<b>Total Contractual Obligations</b>	<b>\$8,777</b>	<b>\$2,167</b>	<b>\$804</b>	<b>\$767</b>	<b>\$738</b>	<b>\$687</b>	<b>\$3,614</b>

## **Table of Contents**

### **Long-Term Debt Obligations**

The long-term debt obligations include the maturity payments of long-term debt, including current portion, and the related contractual interest obligations. Refer to Note 15, Debt, to the consolidated financial statements for additional information on long-term debt.

Contractual interest is the interest we are contracted to pay on the long-term debt obligations without taking into account the interest impact of interest rate swaps related to any of this debt, which at current interest rates would slightly decrease contractual interest. We had \$1,454 of long-term debt subject to variable interest rates at 30 September 2013, excluding fixed-rate debt that has been swapped to variable-rate debt. The rate assumed for the variable interest component of the contractual interest obligation was the rate in effect at 30 September 2013. Variable interest rates are primarily determined by interbank offer rates and by U.S. short-term tax-exempt interest rates.

### **Leases**

Refer to Note 12, Leases, to the consolidated financial statements for additional information on capital and operating leases.

### **Pension Obligations**

The amounts in the table above represent the current estimated cash payments to be made by us that in total equal the recognized pension liabilities. Refer to Note 16, Retirement Benefits, to the consolidated financial statements. These payments are based upon the current valuation assumptions and regulatory environment.

The total accrued liability for pension benefits is impacted by interest rates, plan demographics, actual return on plan assets, continuation or modification of benefits, and other factors. Such factors can significantly impact the amount of the liability and related contributions.

### **Unconditional Purchase Obligations**

Approximately \$700 of our long-term unconditional purchase obligations relate to feedstock supply for numerous HyCO (hydrogen, carbon monoxide, and syngas) facilities. The price of feedstock supply is principally related to the price of natural gas. However, long-term take-or-pay sales contracts to HyCO customers are generally matched to the term of the feedstock supply obligations and provide recovery of price increases in the feedstock supply. Due to the matching of most long-term feedstock supply obligations to customer sales contracts, we do not believe these purchase obligations would have a material effect on our financial condition or results of operations. Refer to Note 17, Commitments and Contingencies, to the consolidated financial statements for additional information on our unconditional purchase obligations.

The unconditional purchase obligations also include other product supply and purchase commitments and electric power and natural gas supply purchase obligations, which are primarily pass-through contracts with our customers. In addition, purchase commitments to spend approximately \$625 for additional plant and equipment are included in the unconditional purchase obligations in 2014.

We also purchase materials, energy, capital equipment, supplies, and services as part of the ordinary course of business under arrangements that are not unconditional purchase obligations. The majority of such purchases are for raw materials and energy, which are obtained under requirements-type contracts at market prices. In total, we purchase approximately \$7.7 billion annually, including the unconditional purchase obligations in the table above.

### **Income Tax Liabilities**

Noncurrent deferred income tax liabilities as of 30 September 2013 were \$827.2. Tax liabilities related to unrecognized tax benefits as of 30 September 2013 were \$124.3. These tax liabilities were excluded from the Contractual Obligations table, as it is impractical to determine a cash impact by year given that payments will vary according to changes in tax laws, tax rates, and our operating results. In addition, there are uncertainties in timing of the effective settlement of our uncertain tax positions with respective taxing authorities. Refer to Note 22, Income Taxes, to the consolidated financial statements for additional information.

### **Discontinued Operations**

Payables and accrued liabilities as of 30 September 2013 include \$148 for the contingent proceeds related to the sale of our Homecare business. Refer to Note 3, Discontinued Operations, to the consolidated financial statements for additional information.





**Table of Contents****Put Options**

We currently have outstanding put option agreements with other shareholders of our Air Products San Fu Company, Ltd. and Indura S.A. subsidiaries. The put options give the shareholders the right to sell stock in the subsidiaries based on pricing terms in the agreements. Refer to Note 17, Commitments and Contingencies, to the consolidated financial statements for additional information. Due to the uncertainty of whether these options would be exercised and the related timing, we excluded the potential payments from the Contractual Obligations table.

**PENSION BENEFITS**

We sponsor defined benefit pension plans that cover a substantial portion of our worldwide employees. The principal defined benefit pension plans the U.S. salaried pension plan and the U.K. pension plan were closed to new participants in 2005 and were replaced with defined contribution plans. Over the long run, the shift to defined contribution plans is expected to reduce volatility of both plan expense and contributions.

For 2013, the fair market value of pension plan assets for our defined benefit plans as of the measurement date increased to \$3,800.8 from \$3,239.1 in 2012. The projected benefit obligation for these plans as of the measurement date was \$4,394.0 and \$4,486.5 in 2013 and 2012, respectively. Refer to Note 16, Retirement Benefits, to the consolidated financial statements for comprehensive and detailed disclosures on our postretirement benefits.

**Pension Expense**

	<b>2013</b>	2012	2011
Pension expense	<b>\$169.7</b>	\$120.4	\$114.1
Special terminations, settlements, and curtailments (included above)	<b>19.8</b>	8.2	1.3
Weighted average discount rate	<b>4.0%</b>	5.0%	5.0%
Weighted average expected rate of return on plan assets	<b>7.7%</b>	8.0%	8.0%
Weighted average expected rate of compensation increase	<b>3.8%</b>	3.9%	4.0%

**2013 vs. 2012**

The increase in pension expense, excluding special items, was primarily attributable to the 100 bp decrease in weighted average discount rate, resulting in higher amortization of actuarial losses. The increase was partially offset by a higher expected return on plan assets and contributions in 2013. Special items of \$19.8 primarily included \$12.4 for pension settlement losses and \$6.9 for special termination benefits relating to the 2013 business restructuring and cost reduction plan.

**2012 vs. 2011**

Pension expense in 2012, excluding special items, was comparable to 2011 expense as a result of no change in the weighted average discount rate from year to year.

**2014 Outlook**

Pension expense is estimated to be approximately \$140 to \$145, excluding special items, in 2014, a decrease of \$5 to \$10 from 2013, resulting primarily from an increase in discount rates, partially offset by unfavorable impacts associated with changes in mortality and inflation assumptions. Pension settlement losses of \$10 to \$25 are expected, dependent on the timing of retirements. In 2014, pension expense will include approximately \$118 for amortization of actuarial losses compared to \$143 in 2013. Net actuarial gains of \$370.4 were recognized in 2013, resulting primarily from an approximately 65 bp increase in the weighted average discount rate as well as actual asset returns above expected returns. Actuarial gains/losses are amortized into pension expense over prospective periods to the extent they are not offset by future gains or losses. Future changes in the discount rate and actual returns on plan assets, different from expected returns, would impact the actuarial gains/losses and resulting amortization in years beyond 2014.

**Pension Funding**

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Pension funding includes both contributions to funded plans and benefit payments for unfunded plans, which are primarily non-qualified plans. With respect to funded plans, our funding policy is that contributions, combined with appreciation and earnings, will be sufficient to pay benefits without creating unnecessary surpluses.

In addition, we make contributions to satisfy all legal funding requirements while managing our capacity to benefit from tax deductions attributable to plan contributions. With the assistance of third party actuaries, we analyze the liabilities and demographics of each plan, which help guide the level of contributions. During 2013 and 2012, our cash contributions to funded plans and benefit payments for unfunded plans were \$300.8 and \$76.4, respectively. Contributions for 2013 include voluntary contributions for U.S. plans of \$220.0.

---

## **Table of Contents**

For 2014, cash contributions to defined benefit plans, including benefit payments for unfunded plans, are estimated to be \$80 to \$100. Contributions to unfunded plans are dependent upon the timing of retirements. Actual future contributions will depend on future funding legislation, discount rates, investment performance, plan design, and various other factors. Refer to the Contractual Obligations discussion on page 34 for a projection of future contributions.

### **ENVIRONMENTAL MATTERS**

We are subject to various environmental laws and regulations in the countries in which we have operations. Compliance with these laws and regulations results in higher capital expenditures and costs. In the normal course of business, we are involved in proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA: the federal Superfund law); Resource Conservation and Recovery Act (RCRA); and similar state and foreign environmental laws relating to the designation of certain sites for investigation or remediation. Our accounting policy for environmental expenditures is discussed in Note 1, Major Accounting Policies, to the consolidated financial statements, and environmental loss contingencies are discussed in Note 17, Commitments and Contingencies, to the consolidated financial statements.

The amounts charged to income from continuing operations related to environmental matters totaled \$37.1, \$44.7, and \$34.0 in 2013, 2012, and 2011, respectively. These amounts represent an estimate of expenses for compliance with environmental laws and activities undertaken to meet internal Company standards. Future costs are not expected to be materially different from these amounts. Refer to Note 17, Commitments and Contingencies, to the consolidated financial statements for additional information.

Although precise amounts are difficult to determine, we estimate that we spent \$4 in both 2013 and 2012 on capital projects to control pollution. Capital expenditures to control pollution in future years are estimated to be approximately \$4 in both 2014 and 2015.

We accrue environmental investigatory and remediation costs for identified sites when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. The potential exposure for such costs is estimated to range from \$86 to a reasonably possible upper exposure of \$100. The consolidated balance sheets at 30 September 2013 and 2012 included an accrual of \$86.7 and \$87.5, respectively. The accrual for the environmental obligations relating to the Pace, Florida; Piedmont, South Carolina; Paulsboro, New Jersey; and Pasadena, Texas, locations is included in these amounts. Refer to Note 17, Commitments and Contingencies, to the consolidated financial statements for further details on these facilities.

Actual costs to be incurred at identified sites in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures. Subject to the imprecision in estimating future environmental costs, we do not expect that any sum we may have to pay in connection with environmental matters in excess of the amounts recorded or disclosed above would have a material adverse impact on our financial position or results of operations in any one year.

Some of our operations are within jurisdictions that have or are developing regulations governing emissions of greenhouse gases (GHG). These include existing and expanding coverage under the European Union Emissions Trading Scheme and California's cap and trade scheme; mandatory reporting and reductions at manufacturing facilities in Alberta, Canada; and mandatory reporting and anticipated constraints on GHG emissions in Ontario, Canada, and South Korea. In addition, the U.S. Environmental Protection Agency is regulating GHG emissions for new construction and major modifications to existing facilities. At the U.S. state level, California's cap and trade program rules have been officially adopted, and our compliance obligation as a hydrogen producer began 1 January 2013. We have been able to mitigate some of the costs through our contractual terms.

Increased public awareness and concern may result in more international, U.S. federal, and/or regional requirements to reduce or mitigate the effects of GHG. Although uncertain, these developments could increase our costs related to consumption of electric power, hydrogen production, and fluorinated gases production. We believe we will be able to mitigate some of the potential costs through our contractual terms, but the lack of definitive legislation or regulatory requirements in some of the jurisdictions where we operate prevents accurate prediction of the long-term impact on us. Any legislation that limits or taxes GHG emissions from our facilities could impact our growth by increasing our operating costs or reducing demand for certain of our products.

Regulation of GHG may also produce new opportunities for us. We continue to develop technologies to help our facilities and our customers lower energy consumption, improve efficiency, and lower emissions. We are also

## **Table of Contents**

developing a portfolio of technologies that capture carbon dioxide from power and chemical plants before it reaches the atmosphere, enable cleaner transportation fuels, and facilitate alternate fuel source development. In addition, the potential demand for clean coal and our carbon capture solutions could increase demand for oxygen, one of our main products, and our proprietary technology for delivering low-cost oxygen.

### **OFF-BALANCE SHEET ARRANGEMENTS**

We have entered into certain guarantee agreements as discussed in Note 17, Commitments and Contingencies, to the consolidated financial statements. We are not a primary beneficiary in any material variable interest entity. Our off-balance sheet arrangements are not reasonably likely to have a material impact on financial condition, changes in financial condition, results of operations, or liquidity.

### **RELATED PARTY TRANSACTIONS**

Our principal related parties are equity affiliates operating primarily in the industrial gas business. We did not engage in any material transactions involving related parties that included terms or other aspects that differ from those which would be negotiated at arm's length with clearly independent parties.

### **INFLATION**

We operate in many countries that experience volatility in inflation and foreign exchange rates. The ability to pass on inflationary cost increases is an uncertainty due to general economic conditions and competitive situations. It is estimated that the cost of replacing our plant and equipment today is greater than its historical cost. Accordingly, depreciation expense would be greater if the expense were stated on a current cost basis.

### **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

Note 1, Major Accounting Policies, to the consolidated financial statements describes our major accounting policies. Judgments and estimates of uncertainties are required in applying our accounting policies in many areas. However, application of the critical accounting policies discussed below requires management's significant judgments, often as the result of the need to make estimates of matters that are inherently uncertain. If actual results were to differ materially from the estimates made, the reported results could be materially affected. Our management has reviewed these critical accounting policies and estimates and related disclosures with our audit committee.

#### **Depreciable Lives of Plant and Equipment**

Net plant and equipment at 30 September 2013 totaled \$8,974.0, and depreciation expense totaled \$864.7 during 2013. Plant and equipment is recorded at cost and depreciated using the straight-line method, which deducts equal amounts of the cost of each asset from earnings every year over its estimated economic useful life.

Economic useful life is the duration of time an asset is expected to be productively employed by us, which may be less than its physical life. Assumptions on the following factors, among others, affect the determination of estimated economic useful life: wear and tear, obsolescence, technical standards, contract life, market demand, competitive position, raw material availability, and geographic location.

The estimated economic useful life of an asset is monitored to determine its appropriateness, especially in light of changed business circumstances. For example, changes in technology, changes in the estimated future demand for products, or excessive wear and tear may result in a shorter estimated useful life than originally anticipated. In these cases, we would depreciate the remaining net book value over the new estimated remaining life, thereby increasing depreciation expense per year on a prospective basis. Likewise, if the estimated useful life is increased, the adjustment to the useful life decreases depreciation expense per year on a prospective basis.

We have numerous long-term customer supply contracts, particularly in the gases on-site business within the Tonnage Gases segment. These contracts principally have initial contract terms of 15 to 20 years. There are also long-term customer supply contracts associated with the tonnage gases business within the Electronics and Performance Materials segment. These contracts principally have initial terms of 10 to 15 years. Additionally, we have several customer supply contracts within the Equipment and Energy segment with contract terms that are primarily 5 to 10 years. The depreciable lives of assets within this segment can be extended to 20 years for certain redeployable assets. Depreciable lives of the production assets related to long-term contracts are matched to the contract lives. Extensions to the contract term of supply frequently occur prior to the expiration of the initial term. As contract terms are extended, the depreciable life of the remaining net book value of the production assets is adjusted to match the new contract term, as long as it does not exceed the economic life of the asset.



**Table of Contents**

The depreciable lives of production facilities within the Merchant Gases segment are principally 15 years. Customer contracts associated with products produced at these types of facilities typically have a much shorter term. The depreciable lives of production facilities within the Electronics and Performance Materials segment, where there is not an associated long-term supply agreement, range from 10 to 15 years. These depreciable lives have been determined based on historical experience combined with judgment on future assumptions such as technological advances, potential obsolescence, competitors' actions, etc. Management monitors its assumptions and may potentially need to adjust depreciable life as circumstances change.

A change in the depreciable life by one year for production facilities within the Merchant Gases and Electronics and Performance Materials segments for which there is not an associated long-term customer supply agreement would impact annual depreciation expense as summarized below:

	Decrease Life By 1 Year	Increase Life By 1 Year
Merchant Gases	\$30	\$(20)
Electronics and Performance Materials	\$16	\$(10)

**Impairment of Assets****Plant and Equipment**

Plant and equipment held for use is grouped for impairment testing at the lowest level for which there are identifiable cash flows. Impairment testing of the asset group occurs whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Such circumstances would include a significant decrease in the market value of a long-lived asset grouping, a significant adverse change in the manner in which the asset grouping is being used or in its physical condition, a history of operating or cash flow losses associated with the use of the asset grouping, or changes in the expected useful life of the long-lived assets.

If such circumstances are determined to exist, an estimate of undiscounted future cash flows produced by that asset group is compared to the carrying value to determine whether impairment exists. If an asset group is determined to be impaired, the loss is measured based on the difference between the asset group's fair value and its carrying value. An estimate of the asset group's fair value is based on the discounted value of its estimated cash flows. Assets to be disposed of by sale are reported at the lower of carrying amount or fair value less cost to sell.

The assumptions underlying cash flow projections represent management's best estimates at the time of the impairment review. Factors that management must estimate include industry and market conditions, sales volume and prices, costs to produce, inflation, etc. Changes in key assumptions or actual conditions that differ from estimates could result in an impairment charge. We use reasonable and supportable assumptions when performing impairment reviews and cannot predict the occurrence of future events and circumstances that could result in impairment charges.

**Goodwill**

The acquisition method of accounting for business combinations currently requires us to make use of estimates and judgments to allocate the purchase price paid for acquisitions to the fair value of the net tangible and identifiable intangible assets. Goodwill represents the excess of the aggregate purchase price over the fair value of net assets of an acquired entity. Goodwill, including goodwill associated with equity affiliates of \$126.4, was \$1,780.2 as of 30 September 2013. The majority of our goodwill is assigned to reporting units within the Merchant Gases and Electronics and Performance Materials segments. Goodwill increased in 2013, primarily as a result of the EPCO and WCG acquisitions in Merchant Gases during the third quarter. Disclosures related to goodwill are included in Note 10, Goodwill, to the consolidated financial statements.

We perform an impairment test annually in the fourth quarter of the fiscal year. In addition, goodwill would be tested more frequently if changes in circumstances or the occurrence of events indicated that potential impairment exists. The tests are done at the reporting unit level, which is defined as one level below the operating segment for which discrete financial information is available and whose operating results are reviewed by segment managers regularly. Currently, we have four business segments and thirteen reporting units. Reporting units are primarily based on products and geographic locations within each business segment.

As part of the goodwill impairment testing, and as permitted under the accounting guidance, we have the option to first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. If we choose not to complete a

qualitative assessment for a given reporting unit, or if the

## **Table of Contents**

initial assessment indicates that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, additional quantitative testing is required.

The first step of the quantitative test requires that we compare the fair value of business reporting units to carrying value, including assigned goodwill. To determine the fair value of a reporting unit, we primarily use an income approach valuation model, representing the present value of future cash flows. Our valuation model uses a five-year growth period for the business and an estimated exit trading multiple. Management has determined the income approach valuation model represents the most appropriate valuation methodology due to the capital-intensive nature of the business, long-term contractual nature of the business, relatively consistent cash flows generated by our reporting units, and limited comparables within the industry. The principal assumptions utilized in our income approach valuation model include revenue growth rate, operating profit margins, discount rate, and exit multiple. Revenue growth rate and operating profit assumptions are consistent with those utilized in our operating plan and long-term financial planning process. The discount rate assumption is calculated based upon an estimated weighted-average cost of capital, which includes factors such as the risk-free rate of return, cost of debt, and expected equity premiums. The exit multiple is determined from comparable industry transactions. Also, the expected cash flows consider the customer attrition rate assumption, which is based on historical experience and current and future expected market conditions. Management judgment is required in the determination of each assumption utilized in the valuation model, and actual results could differ from the estimates.

If the first step of the quantitative test indicates potential impairment, the implied fair value of a reporting unit's goodwill would be compared to its carrying amount. If the carrying amount of the goodwill was greater than its implied fair value, an impairment loss would be recorded.

During 2013, there were no events or changes in circumstances identified that warranted interim goodwill impairment testing. In the fourth quarter of 2013, we conducted the required annual test of goodwill for impairment utilizing the quantitative approach. We determined that the fair value of each of the reporting units substantially exceeded its carrying value, and therefore there were no indications of impairment.

## **Intangible Assets**

Intangible assets with determinable lives at 30 September 2013 totaled \$626.7 and consisted primarily of customer relationships, purchased patents and technology, and land use rights. These intangible assets are tested for impairment as part of the long-lived asset grouping impairment tests. Impairment testing of the asset group occurs whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. See the impairment discussion above under Plant and Equipment for a description of how impairment losses are determined.

Indefinite-lived intangible assets at 30 September 2013 totaled \$90.6 and consisted of trade names and trademarks. Indefinite-lived intangibles are subject to impairment testing at least annually or more frequently if a change in circumstances or the occurrence of events indicates that potential impairment exists. The impairment test for indefinite-lived intangible assets encompasses calculating the fair value of an indefinite-lived intangible asset and comparing the fair value to its carrying value. If the carrying value exceeds the fair value, an impairment loss is recorded. We have the option to first assess qualitative factors to determine whether it is more likely than not that the fair value of an indefinite-lived intangible is less than its carrying value prior to performing the additional quantitative testing. To determine fair value, we utilize an income approach, the royalty savings method. This method values an intangible asset by estimating the royalties saved through ownership of the asset.

In the fourth quarter of 2013, we conducted the required annual impairment test utilizing the quantitative approach and determined that the fair value of each indefinite-lived intangible asset exceeded its carrying value.

## **Equity Investments**

Investments in and advances to equity affiliates totaled \$1,195.5 at 30 September 2013. The majority of our investments are non-publicly traded ventures with other companies in the industrial gas business. Summarized financial information of equity affiliates is included in Note 8, Summarized Financial Information of Equity Affiliates, to the consolidated financial statements. Equity investments are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the investment may not be recoverable.

In the event that a decline in fair value of an investment occurs, and the decline in value is considered to be other than temporary, an impairment loss would be recognized. Management's estimate of fair value of an investment is based on estimated discounted future cash flows expected to be generated by the investee. Changes in key





---

## **Table of Contents**

assumptions about the financial condition of an investee or actual conditions that differ from estimates could result in an impairment charge.

### **Income Taxes**

We account for income taxes under the liability method. Under this method, deferred tax assets and liabilities are recognized for the tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities measured using the enacted tax rate. At 30 September 2013, accrued income taxes and net deferred tax liabilities amounted to \$63.0 and \$662.7, respectively. Tax liabilities related to uncertain tax positions as of 30 September 2013 were \$124.3, excluding interest and penalties. Income tax expense for the year ended 30 September 2013 was \$307.9. Disclosures related to income taxes are included in Note 22, Income Taxes, to the consolidated financial statements.

Management judgment is required in determining income tax expense and the related balance sheet amounts. Judgments are required concerning the ultimate outcome of tax contingencies and the realization of deferred tax assets.

Actual income taxes paid may vary from estimates, depending upon changes in income tax laws, actual results of operations, and the final audit of tax returns by taxing authorities. Tax assessments may arise several years after tax returns have been filed. We believe that our recorded tax liabilities adequately provide for these assessments.

Deferred tax assets are recorded for operating losses and tax credit carryforwards. However, when there are not sufficient sources of future taxable income to realize the benefit of the operating losses or tax credit carryforwards, these deferred tax assets are reduced by a valuation allowance. A valuation allowance is recognized if, based on the weight of available evidence, it is considered more likely than not that some portion or all of the deferred tax asset will not be realized. The factors used to assess the likelihood of realization include forecasted future taxable income and available tax planning strategies that could be implemented to realize or renew net deferred tax assets in order to avoid the potential loss of future tax benefits. The effect of a change in the valuation allowance is reported in the income tax expense.

A 1% point increase/decrease in our effective tax rate would decrease/increase net income by approximately \$14.

### **Pension and Other Postretirement Benefits**

The amounts recognized in the consolidated financial statements for pension and other postretirement benefits are determined on an actuarial basis utilizing numerous assumptions. The discussion that follows provides information on the significant assumptions and expense associated with the defined benefit plans.

Actuarial models are used in calculating the expense and liability related to the various defined benefit plans. These models have an underlying assumption that the employees render service over their service lives on a relatively consistent basis; therefore, the expense of benefits earned should follow a similar pattern.

Several assumptions and statistical variables are used in the models to calculate the expense and liability related to the plans. We determine assumptions about the discount rate, the expected rate of return on plan assets, and the rate of compensation increase. Note 16, Retirement Benefits, to the consolidated financial statements includes disclosure of these rates on a weighted-average basis for both the domestic and international plans. The actuarial models also use assumptions about demographic factors such as retirement age, mortality, and turnover rates. We believe the actuarial assumptions are reasonable. However, actual results could vary materially from these actuarial assumptions due to economic events and different rates of retirement, mortality, and turnover.

One of the critical assumptions used in the actuarial models is the discount rate. This rate reflects the prevailing market rate for high-quality, fixed-income debt instruments with maturities corresponding to the expected timing of benefit payments as of the annual measurement date for each of the various plans. The timing and amount of the expected benefit payments are matched against the returns of high-quality corporate bonds over the same time period to determine an overall effective discount rate. The rate is used to discount the future cash flows of benefit obligations back to the measurement date. This rate will change from year-to-year based on market conditions that affect corporate bond yields. A higher discount rate decreases the present value of the benefit obligations and results in lower pension expense. A 50 bp increase/decrease in the discount rate decreases/increases pension expense by approximately \$30 per year.

The expected rate of return on plan assets represents the average rate of return to be earned by plan assets over the period that the benefits included in the benefit obligation are to be paid. The expected return on plan assets assumption is based on a weighted average of estimated long-term returns of major asset classes and the historical



---

## **Table of Contents**

performance of plan assets. In determining asset class returns, we take into account historical long-term returns and the value of active management, as well as the interest rate environment. Asset allocation is determined based on long-term return, volatility and correlation characteristics of the asset classes, the profiles of the plans' liabilities, and acceptable levels of risk. Lower returns on the plan assets result in higher pension expense. A 50 bp increase/decrease in the estimated rate of return on plan assets decreases/increases pension expense by approximately \$18 per year.

We use a market-related valuation method for recognizing certain investment gains or losses for our significant pension plans. Investment gains or losses are the difference between the expected and actual return based on plan assets. The expected return on plan assets is determined based on a market-related value of plan assets, which is a calculated value that recognizes investment gains and losses in fair value related to equities over a five-year period from the year in which they occur, which reduces year-to-year volatility. The market-related value for fixed income investments is the actual fair value. Expense in future periods will be impacted as gains or losses are recognized in the market-related value of assets.

The expected rate of compensation increase is another key assumption. We determine this rate based on review of the underlying long-term salary increase trend characteristic of labor markets and historical experience, as well as comparison to peer companies. A 50 bp increase/decrease in the expected rate of compensation increases/decreases pension expense by approximately \$16 per year.

## **Loss Contingencies**

In the normal course of business we encounter contingencies, i.e., situations involving varying degrees of uncertainty as to the outcome and effect on us. We accrue a liability for loss contingencies when it is considered probable that a liability has been incurred and the amount of loss can be reasonably estimated. When only a range of possible loss can be established, the most probable amount in the range is accrued. If no amount within this range is a better estimate than any other amount within the range, the minimum amount in the range is accrued.

Contingencies include those associated with litigation and environmental matters, for which our accounting policy is discussed in Note 1, Major Accounting Policies, to the consolidated financial statements, and particulars are provided in Note 17, Commitments and Contingencies, to the consolidated financial statements. Significant judgment is required in both determining probability and whether the amount of loss associated with a contingency can be reasonably estimated. These determinations are made based on the best available information at the time. As additional information becomes available, we reassess probability and estimates of loss contingencies. Revisions in the estimates associated with loss contingencies could have a significant impact on our results of operations in the period in which an accrual for loss contingencies is recorded or adjusted. For example, due to the inherent uncertainties related to environmental exposures, a significant increase to environmental liabilities could occur if a new site is designated, the scope of remediation is increased, or our proportionate share is increased. Similarly, a future charge for regulatory fines or damage awards associated with litigation could have a significant impact on our net income in the period in which it is recorded.

## **NEW ACCOUNTING GUIDANCE**

See Note 2, New Accounting Guidance, to the consolidated financial statements for information concerning the implementation and impact of new accounting guidance.

## **FORWARD-LOOKING STATEMENTS**

This Management's Discussion and Analysis contains forward-looking statements within the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, including statements about earnings guidance and business outlook. These forward-looking statements are based on management's reasonable expectations and assumptions as of the date of this release. Actual performance and financial results may differ materially from projections and estimates expressed in the forward-looking statements because of many factors not anticipated by management, including, without limitation, weakening or reversal of global or regional economic recovery; future financial and operating performance of major customers; unanticipated contract terminations or customer cancellations or postponement of projects and sales; the impact of competitive products and pricing; interruption in ordinary sources of supply of raw materials; unanticipated asset impairments or losses; the impact of price fluctuations in natural gas; the ability to recover unanticipated increased energy and raw material costs from customers; costs and outcomes of litigation or regulatory investigations; the impact of management and organizational changes, including the chief executive officer search; the success of productivity programs; the timing, impact, and other uncertainties of future

**Table of Contents**

acquisitions or divestitures; significant fluctuations in interest rates and foreign currencies from that currently anticipated; political risks, including the risks of unanticipated government actions that may result in project delays, cancellations or expropriations; the impact of changes in environmental, tax or other legislation and regulations in jurisdictions in which the Company and its affiliates operate; the impact on the effective tax rate of changes in the mix of earnings among our U.S. and international operations; and other risk factors described in Section 1A. The Company disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements contained in this document to reflect any change in the Company's assumptions, beliefs or expectations or any change in events, conditions, or circumstances upon which any such forward-looking statements are based.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Our earnings, cash flows, and financial position are exposed to market risks relating to fluctuations in interest rates and foreign currency exchange rates. It is our policy to minimize our cash flow exposure to adverse changes in currency exchange rates and to manage the financial risks inherent in funding with debt capital.

We address these financial exposures through a controlled program of risk management that includes the use of derivative financial instruments. Counterparties to all derivative contracts are major financial institutions, thereby minimizing the risk of credit loss. All instruments are entered into for other than trading purposes. For details on the types and use of these derivative instruments and the major accounting policies, see Note 1, Major Accounting Policies, and Note 13, Financial Instruments, to the consolidated financial statements, for additional information. Additionally, we mitigate adverse energy price impacts through our cost pass-through contracts with customers and price increases.

Our derivative and other financial instruments consist of long-term debt (including current portion), interest rate swaps, cross currency interest rate swaps, and foreign exchange-forward contracts. The net market value of these financial instruments combined is referred to below as the net financial instrument position and is disclosed in Note 14, Fair Value Measurements, to the consolidated financial statements.

At 30 September 2013 and 2012, the net financial instrument position was a liability of \$5,719.5 and \$4,925.1, respectively. The increase in the net financial instrument position was due primarily to the impact of a higher book value of long-term debt (excluding exchange rate impacts). The increase in book value was primarily driven by the issuance of a 2.0% Eurobond for 300.0 million (\$397.0) on 7 August 2013 that matures on 7 August 2020 and the classification of \$400.0 of commercial paper as long-term debt due to our ability and intent to refinance the debt under our \$2,500.0 committed credit facility maturing in 2018.

The analysis below presents the sensitivity of the market value of our financial instruments to selected changes in market rates and prices. Market values are the present value of projected future cash flows based on the market rates and prices chosen. The market values for interest rate risk and foreign currency risk are calculated by us using a third-party software model that utilizes standard pricing models to determine the present value of the instruments based on market conditions (interest rates, spot and forward exchange rates, and implied volatilities) as of the valuation date.

**Interest Rate Risk**

Our debt portfolio, including swap agreements, as of 30 September 2013 primarily comprised debt denominated in U.S. dollars (52%) and Euros (28%), including the effect of currency swaps. This debt portfolio is composed of 54% fixed-rate debt and 46% variable-rate debt. Changes in interest rates have different impacts on the fixed- and variable-rate portions of our debt portfolio. A change in interest rates on the fixed portion of the debt portfolio impacts the net financial instrument position but has no impact on interest incurred or cash flows. A change in interest rates on the variable portion of the debt portfolio impacts the interest incurred and cash flows but does not impact the net financial instrument position.

The sensitivity analysis related to the fixed portion of our debt portfolio assumes an instantaneous 100 bp move in interest rates from the level at 30 September 2013, with all other variables held constant. A 100 bp increase in market interest rates would result in a decrease of \$143 and \$150 in the net liability position of financial instruments at 30 September 2013 and 2012, respectively. A 100 bp decrease in market interest rates would result in an increase of \$154 and \$162 in the net liability position of financial instruments at 30 September 2013 and 2012, respectively.

**Table of Contents**

Based on the variable-rate debt included in our debt portfolio, including the interest rate swap agreements, a 100 bp increase in interest rates would result in an additional \$29 and \$26 of interest incurred per year at the end of 30 September 2013 and 2012, respectively. A 100 bp decline in interest rates would lower interest incurred by \$29 and \$26 per year at 30 September 2013 and 2012, respectively.

**Foreign Currency Exchange Rate Risk**

The sensitivity analysis assumes an instantaneous 10% change in the foreign currency exchange rates from their levels at 30 September 2013 and 2012, with all other variables held constant. A 10% strengthening or weakening of the functional currency of an entity versus all other currencies would result in a decrease or increase, respectively, of \$295 and \$274 in the net liability position of financial instruments at 30 September 2013 and 2012, respectively.

The primary currencies for which we have exchange rate exposure are the U.S. dollar versus the Euro and the Euro versus the Pound Sterling. Foreign currency debt, cross currency interest rate swaps, and foreign exchange-forward contracts are used in countries where we do business, thereby reducing our net asset exposure. Foreign exchange-forward contracts are also used to hedge our firm and highly anticipated foreign currency cash flows. Thus, there is either an asset/liability or cash flow exposure related to all of the financial instruments in the above sensitivity analysis for which the impact of a movement in exchange rates would be in the opposite direction and materially equal to the impact on the instruments in the analysis.

**Table of Contents**

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA  
MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

Air Products' management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting, which is defined in the following sentences, is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles and includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- (ii) provide reasonable assurance that the transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. 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
- (iii) 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 inherent limitations, internal control over financial reporting can only provide reasonable assurance and may not prevent or detect misstatements. Further, because of changes in conditions, the effectiveness of our internal control over financial reporting may vary over time. Our processes contain self-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

Management has evaluated the effectiveness of its internal control over financial reporting based on criteria established in Internal Control - Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that, as of 30 September 2013, the Company's internal control over financial reporting was effective.

KPMG LLP, an independent registered public accounting firm, has issued their opinion on the Company's internal control over financial reporting as of 30 September 2013 as stated in their report which appears herein.

/s/ John E. McGlade  
John E. McGlade  
Chairman, President, and  
Chief Executive Officer  
26 November 2013

/s/ M. Scott Crocco  
M. Scott Crocco  
Senior Vice President and  
Chief Financial Officer  
26 November 2013

---

**Table of Contents**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Board of Directors and Shareholders of Air Products and Chemicals, Inc.:

We have audited the accompanying consolidated balance sheets of Air Products and Chemicals, Inc. and Subsidiaries (the Company) as of 30 September 2013 and 2012, and the related consolidated income statements, consolidated comprehensive income statements, consolidated statements of equity, and cash flows for each of the years in the three-year period ended 30 September 2013. In connection with our audits of the consolidated financial statements, we have audited the financial statement schedule referred to in Item 15(a)(2) in this Form 10-K. We also have audited the Company's internal control over financial reporting as of 30 September 2013, based on criteria established in Internal Control - Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for these consolidated financial statements and financial statement schedule, 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 Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedule and an opinion on the Company's internal control over financial reporting based on our audits.

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

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

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Air Products and Chemicals, Inc. and Subsidiaries as of 30 September 2013 and 2012, and the results of their operations and their cash flows for each of the years in the three-year period ended 30 September 2013, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein. Also in our opinion, Air Products and Chemicals, Inc. and Subsidiaries maintained, in all material respects, effective internal control over financial reporting as of 30 September 2013, based on criteria established in Internal Control - Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

/s/ KPMG LLP

Philadelphia, Pennsylvania

26 November 2013



**Table of Contents****The Consolidated Financial Statements**

Air Products and Chemicals, Inc. and Subsidiaries

**CONSOLIDATED INCOME STATEMENTS**

Year ended 30 September (Millions of dollars, except for share data)	2013	2012	2011
<b>Sales</b>	<b>\$10,180.4</b>	\$9,611.7	\$9,673.7
Cost of sales	7,472.1	7,051.9	7,098.3
Selling and administrative	1,066.3	946.8	941.7
Research and development	133.7	126.4	118.8
Business restructuring and cost reduction plans	231.6	327.4	
Gain on previously held equity interest		85.9	
Net loss on Airgas transaction			48.5
Customer bankruptcy		9.8	
Pension settlement loss	12.4		
Advisory costs	10.1		
Other income (expense), net	70.2	47.1	41.7
<b>Operating Income</b>	<b>1,324.4</b>	1,282.4	1,508.1
Equity affiliates income	167.8	153.8	154.3
Interest expense	141.8	123.7	115.5
<b>Income from Continuing Operations before Taxes</b>	<b>1,350.4</b>	1,312.5	1,546.9
Income tax provision	307.9	287.3	375.3
<b>Income from Continuing Operations</b>	<b>1,042.5</b>	1,025.2	1,171.6
<b>Income (Loss) from Discontinued Operations, net of tax</b>	<b>(10.0)</b>	168.1	89.9
<b>Net Income</b>	<b>1,032.5</b>	1,193.3	1,261.5
<b>Less: Net Income Attributable to Noncontrolling Interests</b>	<b>38.3</b>	26.0	37.3
<b>Net Income Attributable to Air Products</b>	<b>\$994.2</b>	\$1,167.3	\$1,224.2
<b>Net Income Attributable to Air Products</b>			
Income from continuing operations	\$1,004.2	\$999.2	\$1,134.3
Income (loss) from discontinued operations	(10.0)	168.1	89.9
<b>Net Income Attributable to Air Products</b>	<b>\$994.2</b>	\$1,167.3	\$1,224.2
<b>Basic Earnings Per Common Share Attributable to Air Products</b>			
Income from continuing operations	\$4.79	\$4.73	\$5.33
Income (loss) from discontinued operations	(.05)	.80	.42
<b>Net Income Attributable to Air Products</b>	<b>\$4.74</b>	\$5.53	\$5.75
<b>Diluted Earnings Per Common Share Attributable to Air Products</b>			
Income from continuing operations	\$4.73	\$4.66	\$5.22
Income (loss) from discontinued operations	(.05)	.78	.41
<b>Net Income Attributable to Air Products</b>	<b>\$4.68</b>	\$5.44	\$5.63
<b>Weighted Average of Common Shares Outstanding (in millions)</b>	<b>209.7</b>	211.2	213.0
<b>Weighted Average of Common Shares Outstanding Assuming Dilution (in millions)</b>	<b>212.3</b>	214.7	217.6

The accompanying notes are an integral part of these statements.

**Table of Contents**

Air Products and Chemicals, Inc. and Subsidiaries

**CONSOLIDATED COMPREHENSIVE INCOME STATEMENTS**

Year ended 30 September (Millions of dollars)	2013	2012	2011
<b>Net Income</b>	<b>\$1,032.5</b>	\$1,193.3	\$1,261.5
<b>Other Comprehensive Income (Loss), net of tax:</b>			
Translation adjustments, net of tax of (\$44.8), \$8.9, and \$9.9	(25.0)	84.6	(82.8)
Net gain (loss) on derivatives, net of tax of \$14.5, (\$9.8), and \$.2	35.0	(21.8)	.8
Unrealized holding loss on available-for-sale securities, net of tax of \$ , \$ , and (\$3.3)			(4.6)
Pension and postretirement benefits, net of tax of \$154.8, (\$124.6), and (\$59.2)	231.9	(246.0)	(66.6)
Reclassification adjustments:			
Currency translation adjustment	.6	13.3	.4
Derivatives, net of tax of (\$5.5), \$5.0, and \$3.4	(20.2)	12.4	11.5
Available-for-sale securities, net of tax of \$ , \$ , and (\$9.3)			(16.1)
Pension and postretirement benefits, net of tax of \$55.9, \$36.5, and \$35.1	104.9	67.0	67.7
<b>Total Other Comprehensive Income (Loss)</b>	<b>327.2</b>	(90.5)	(89.7)
<b>Comprehensive Income</b>	<b>1,359.7</b>	1,102.8	1,171.8
<b>Net Income Attributable to Noncontrolling Interests</b>	<b>38.3</b>	26.0	37.3
<b>Other Comprehensive Income (Loss) Attributable to Noncontrolling Interests</b>	<b>(1.0)</b>	4.9	4.3
<b>Comprehensive Income Attributable to Air Products</b>	<b>\$1,322.4</b>	\$1,071.9	\$1,130.2

The accompanying notes are an integral part of these statements.

**Table of Contents**

Air Products and Chemicals, Inc. and Subsidiaries

**CONSOLIDATED BALANCE SHEETS**

30 September (Millions of dollars, except for share data)	2013	2012
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash items	\$450.4	\$454.4
Trade receivables, net	1,544.3	1,544.7
Inventories	706.1	786.6
Contracts in progress, less progress billings	182.3	190.8
Prepaid expenses	121.1	81.7
Other receivables and current assets	432.4	342.0
Current assets of discontinued operations	2.5	15.6
<b>Total Current Assets</b>	<b>3,439.1</b>	<b>3,415.8</b>
Investment in net assets of and advances to equity affiliates	1,195.5	1,175.7
Plant and equipment, net	8,974.0	8,240.6
Goodwill	1,653.8	1,598.4
Intangible assets, net	717.3	761.6
Noncurrent capital lease receivables	1,476.9	1,328.9
Other noncurrent assets	393.5	393.6
Noncurrent assets of discontinued operations		27.2
<b>Total Noncurrent Assets</b>	<b>14,411.0</b>	<b>13,526.0</b>
<b>Total Assets</b>	<b>\$17,850.1</b>	<b>\$16,941.8</b>
<b>Liabilities and Equity</b>		
<b>Current Liabilities</b>		
Payables and accrued liabilities	\$1,944.9	\$1,927.7
Accrued income taxes	63.0	48.5
Short-term borrowings	709.9	633.4
Current portion of long-term debt	507.4	74.3
Current liabilities of discontinued operations	2.4	6.0
<b>Total Current Liabilities</b>	<b>3,227.6</b>	<b>2,689.9</b>
Long-term debt	5,056.3	4,584.2
Other noncurrent liabilities	1,164.3	1,980.9
Deferred income taxes	827.2	670.8
Noncurrent liabilities of discontinued operations		.2
<b>Total Noncurrent Liabilities</b>	<b>7,047.8</b>	<b>7,236.1</b>
<b>Total Liabilities</b>	<b>10,275.4</b>	<b>9,926.0</b>
<b>Commitments and Contingencies</b> See Note 17		
<b>Redeemable Noncontrolling Interest</b>	<b>375.8</b>	<b>392.5</b>
<b>Air Products Shareholders' Equity</b>		
Common stock (par value \$1 per share; issued 2013 and 2012 249,455,584 shares)	249.4	249.4
Capital in excess of par value	799.2	810.5
Retained earnings	9,646.4	9,234.5
Accumulated other comprehensive loss	(1,020.6)	(1,348.8)
Treasury stock, at cost (2013 38,276,327 shares; 2012 36,979,704 shares)	(2,632.3)	(2,468.4)
<b>Total Air Products Shareholders' Equity</b>	<b>7,042.1</b>	<b>6,477.2</b>
<b>Noncontrolling Interests</b>	<b>156.8</b>	<b>146.1</b>
<b>Total Equity</b>	<b>7,198.9</b>	<b>6,623.3</b>
<b>Total Liabilities and Equity</b>	<b>\$17,850.1</b>	<b>\$16,941.8</b>

The accompanying notes are an integral part of these statements.



**Table of Contents**

Air Products and Chemicals, Inc. and Subsidiaries

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

Year ended 30 September (Millions of dollars)	2013	2012	2011
<b>Operating Activities</b>			
Net Income	\$1,032.5	\$1,193.3	\$1,261.5
Less: Net income attributable to noncontrolling interests	38.3	26.0	37.3
Net income attributable to Air Products	994.2	1,167.3	1,224.2
(Income) Loss from discontinued operations	10.0	(168.1)	(89.9)
Income from continuing operations attributable to Air Products	1,004.2	999.2	1,134.3
Adjustments to reconcile income to cash provided by operating activities:			
Depreciation and amortization	907.0	840.8	834.3
Deferred income taxes	12.8	65.2	185.7
Benefit from Spanish tax ruling		(58.3)	
Gain on previously held equity interest		(85.9)	
Undistributed earnings of unconsolidated affiliates	(59.2)	(53.6)	(47.5)
Gain on sale of assets and investments	(20.0)	(8.4)	(14.6)
Share-based compensation	43.5	43.8	44.8
Noncurrent capital lease receivables	(151.4)	(282.5)	(272.5)
Net loss on Airgas transaction			48.5
Payment of Airgas acquisition-related costs			(156.2)
Write-down of long-lived assets associated with restructuring / customer bankruptcy	100.4	80.2	
Other adjustments	(76.4)	124.5	68.2
Working capital changes that provided (used) cash, excluding effects of acquisitions and divestitures:			
Trade receivables	4.8	(55.1)	(53.8)
Inventories	75.0	1.3	(107.5)
Contracts in progress, less progress billings	(16.2)	(42.9)	16.7
Other receivables	(77.0)	(18.3)	8.0
Payables and accrued liabilities	(130.3)	249.7	(29.8)
Other working capital	(64.1)	(34.6)	51.8
<b>Cash Provided by Operating Activities</b>	<b>1,553.1</b>	<b>1,765.1</b>	<b>1,710.4</b>
<b>Investing Activities</b>			
Additions to plant and equipment	(1,524.2)	(1,521.0)	(1,309.3)
Acquisitions, less cash acquired	(224.9)	(863.4)	(10.8)
Investment in and advances to unconsolidated affiliates	1.3	(175.4)	(45.8)
Proceeds from sale of Airgas stock			94.7
Proceeds from sale of assets and investments	52.8	52.5	81.6
Change in restricted cash		76.1	19.8
Other investing activities	(2.0)	(4.0)	
<b>Cash Used for Investing Activities</b>	<b>(1,697.0)</b>	<b>(2,435.2)</b>	<b>(1,169.8)</b>
<b>Financing Activities</b>			
Long-term debt proceeds	927.2	900.4	409.8
Payments on long-term debt	(437.5)	(490.6)	(187.1)
Net increase in commercial paper and short-term borrowings	437.7	9.8	234.3
Dividends paid to shareholders	(565.6)	(514.9)	(456.7)
Purchase of treasury shares	(461.6)	(53.1)	(649.2)
Proceeds from stock option exercises	226.4	124.3	148.2
Excess tax benefit from share-based compensation	37.9	31.0	47.6
Payment for subsidiary shares from noncontrolling interests	(14.0)	(58.4)	
Other financing activities	(35.1)	(26.9)	(31.5)
<b>Cash Provided by (Used for) Financing Activities</b>	<b>115.4</b>	<b>(78.4)</b>	<b>(484.6)</b>
<b>Discontinued Operations</b>			
Cash provided by operating activities	14.3	33.6	42.8
Cash provided by (used for) investing activities	(1.2)	765.4	(42.4)
Cash provided by financing activities			.1
<b>Cash Provided by Discontinued Operations</b>	<b>13.1</b>	<b>799.0</b>	<b>.5</b>
<b>Effect of Exchange Rate Changes on Cash</b>	<b>11.4</b>	<b>(18.6)</b>	<b>(8.3)</b>
Increase (Decrease) in Cash and Cash Items	(4.0)	31.9	48.2
Cash and Cash Items Beginning of Year	454.4	422.5	374.3
Cash and Cash Items End of Period	450.4	454.4	422.5
Less: Cash and Cash Items Discontinued Operations			1.1

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Cash and Cash Items - Continuing Operations

**\$450.4**

\$454.4

\$421.4

The accompanying notes are an integral part of these statements.

**Table of Contents**

Air Products and Chemicals, Inc. and Subsidiaries

**CONSOLIDATED STATEMENTS OF EQUITY**

Year ended 30 September (Millions of dollars)	Common Stock	Capital in Excess of Par	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Air Products Shareholders Equity	Non- controlling Interests	Total Equity
<b>Balance 30 September 2010</b>	<b>\$249.4</b>	<b>\$802.2</b>	<b>\$7,852.2</b>	<b>\$(1,159.4)</b>	<b>\$(2,197.5)</b>	<b>\$5,546.9</b>	<b>\$150.7</b>	<b>\$5,697.6</b>
Net Income			1,224.2			1,224.2	37.3	1,261.5
Other comprehensive income (loss)				(94.0)		(94.0)	4.3	(89.7)
Cash dividends (\$2.23 per share)			(473.8)			(473.8)		(473.8)
Share-based compensation expense		44.8				44.8		44.8
Purchase of treasury shares					(649.2)	(649.2)		(649.2)
Issuance of treasury shares for stock option and award plans		(98.6)			241.4	142.8		142.8
Tax benefit of stock option and award plans		63.7				63.7		63.7
Dividends to noncontrolling interests							(31.4)	(31.4)
Purchase of noncontrolling interests		(6.1)				(6.1)		(6.1)
Contribution from noncontrolling interests							1.4	1.4
Other		(.4)	(3.1)			(3.5)	(19.4)	(22.9)
<b>Balance 30 September 2011</b>	<b>\$249.4</b>	<b>\$805.6</b>	<b>\$8,599.5</b>	<b>\$(1,253.4)</b>	<b>\$(2,605.3)</b>	<b>\$5,795.8</b>	<b>\$142.9</b>	<b>\$5,938.7</b>
Net Income			1,167.3			1,167.3	28.4	1,195.7
Other comprehensive income (loss)				(95.4)		(95.4)	4.9	(90.5)
Cash dividends (\$2.50 per share)			(529.0)			(529.0)		(529.0)
Share-based compensation expense		43.4				43.4		43.4
Purchase of treasury shares					(53.1)	(53.1)		(53.1)
Issuance of treasury shares for stock option and award plans		(74.6)			190.0	115.4		115.4
Tax benefit of stock option and award plans		38.6				38.6		38.6
Indura business combination							14.8	14.8
Dividends to noncontrolling interests							(26.7)	(26.7)
Purchase of noncontrolling interests		(4.4)				(4.4)	(1.9)	(6.3)
Other		1.9	(3.3)			(1.4)	(16.3)	(17.7)
<b>Balance 30 September 2012</b>	<b>\$249.4</b>	<b>\$810.5</b>	<b>\$9,234.5</b>	<b>\$(1,348.8)</b>	<b>\$(2,468.4)</b>	<b>\$6,477.2</b>	<b>\$146.1</b>	<b>\$6,623.3</b>
Net Income			994.2			994.2	30.2	1,024.4
Other comprehensive income (loss)				328.2		328.2	(1.0)	327.2
Cash dividends (\$2.77 per share)			(579.6)			(579.6)		(579.6)
Share-based compensation expense		43.5				43.5		43.5
Purchase of treasury shares					(461.6)	(461.6)		(461.6)
Issuance of treasury shares for stock option and award plans		(87.4)			297.7	210.3		210.3
Tax benefit of stock option and award plans		35.5				35.5		35.5
Dividends to noncontrolling interests							(18.4)	(18.4)
Purchase of noncontrolling interests		(2.9)				(2.9)		(2.9)
Other			(2.7)			(2.7)	(.1)	(2.8)
<b>Balance 30 September 2013</b>	<b>\$249.4</b>	<b>\$799.2</b>	<b>\$9,646.4</b>	<b>\$(1,020.6)</b>	<b>\$(2,632.3)</b>	<b>\$7,042.1</b>	<b>\$156.8</b>	<b>\$7,198.9</b>

The accompanying notes are an integral part of these statements.

**Table of Contents****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(Millions of dollars, except for share data)

1.	<u>Major Accounting Policies</u>	52
2.	<u>New Accounting Guidance</u>	58
3.	<u>Discontinued Operations</u>	59
4.	<u>Business Restructuring and Cost Reduction Plans</u>	60
5.	<u>Business Combinations</u>	61
6.	<u>Airgas Transaction</u>	63
7.	<u>Inventories</u>	63
8.	<u>Summarized Financial Information of Equity Affiliates</u>	64
9.	<u>Plant and Equipment, net</u>	65
10.	<u>Goodwill</u>	65
11.	<u>Intangible Assets</u>	66
12.	<u>Leases</u>	66
13.	<u>Financial Instruments</u>	67
14.	<u>Fair Value Measurements</u>	70
15.	<u>Debt</u>	72
16.	<u>Retirement Benefits</u>	74
17.	<u>Commitments and Contingencies</u>	81
18.	<u>Capital Stock</u>	84
19.	<u>Share-Based Compensation</u>	85
20.	<u>Noncontrolling Interests</u>	88
21.	<u>Earnings per Share</u>	88
22.	<u>Income Taxes</u>	89
23.	<u>Supplemental Information</u>	93
24.	<u>Summary by Quarter (Unaudited)</u>	95
25.	<u>Business Segment and Geographic Information</u>	96
<b>1. MAJOR ACCOUNTING POLICIES</b>		

**Basis of Presentation and Consolidation Principles**

The accompanying consolidated financial statements of Air Products and Chemicals, Inc. were prepared in accordance with accounting principles generally accepted in the United States of America ( U.S. GAAP ) and include the accounts of Air Products and Chemicals, Inc. and those of its controlled subsidiaries ( we, our, us, the Company, Air Products, or registrant ), which are generally majority owned. Intercompany transactions and balances are eliminated in consolidation.

We consolidate all entities that we control. The general condition for control is ownership of a majority of the voting interests of an entity. Control may also exist in arrangements where we are the primary beneficiary of a variable interest entity (VIE). An entity that will have both the power to direct the activities that most significantly impact the economic performance of the VIE and the obligation to absorb the losses or receive the benefits significant to the VIE is considered a primary beneficiary of that entity. We have determined that we are not a primary beneficiary in any material VIE.

Certain prior year information has been reclassified to conform to the 2013 presentation.

**Estimates and Assumptions**

The preparation of the financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

**Revenue Recognition**



## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Revenue from product sales is recognized as risk and title to the product transfer to the customer (which generally occurs at the time shipment is made), the sales price is fixed or determinable, and collectability is reasonably assured. Sales returns and allowances are not a business practice in the industry.

Revenue from equipment sale contracts is recorded primarily using the percentage-of-completion method. Under this method, revenue from the sale of major equipment, such as liquefied natural gas (LNG) heat exchangers and large

## **Table of Contents**

air separation units, is recognized primarily based on labor hours incurred to date compared with total estimated labor hours. Changes to total estimated labor hours and anticipated losses, if any, are recognized in the period determined.

Certain contracts associated with facilities that are built to provide product to a specific customer are required to be accounted for as leases. In cases where operating lease treatment is necessary, there is no difference in revenue recognition over the life of the contract as compared to accounting for the contract as product sales. In cases where capital lease treatment is necessary, the timing of revenue and expense recognition is impacted. Revenue and expense are recognized up front for the sale of equipment component of the contract as compared to revenue recognition over the life of the arrangement under contracts not qualifying as capital leases. Additionally, a portion of the revenue representing interest income from the financing component of the lease receivable is reflected as sales over the life of the contract. Allowances for credit losses associated with capital lease receivables are recorded using the specific identification method. As of 30 September 2013, the credit quality of capital lease receivables did not require a material allowance for credit losses.

If an arrangement involves multiple deliverables, the delivered items are considered separate units of accounting if the items have value on a stand-alone basis. Revenues are allocated to each deliverable based upon relative selling prices derived from company specific evidence.

Amounts billed for shipping and handling fees are classified as sales in the consolidated income statements.

Amounts billed for sales and use taxes, value-added taxes, and certain excise and other specific transactional taxes imposed on revenue-producing transactions are presented on a net basis and excluded from sales in the consolidated income statements. We record a liability until remitted to the respective taxing authority.

## **Cost of Sales**

Cost of sales predominantly represents the cost of tangible products sold. These costs include labor, raw materials, plant engineering, power, depreciation, production supplies and materials packaging costs, and maintenance costs. Costs incurred for shipping and handling are also included in cost of sales.

## **Depreciation**

Depreciation is recorded using the straight-line method, which deducts equal amounts of the cost of each asset from earnings every year over its expected economic useful life. The principal lives for major classes of plant and equipment are summarized in Note 9, Plant and Equipment, net.

## **Selling and Administrative**

The principal components of selling and administrative expenses are salaries, advertising, and promotional costs.

## **Postemployment Benefits**

When termination benefits provided to employees as part of a cost reduction plan, such as that discussed in Note 4, Business Restructuring and Cost Reduction Plans, meet the definition of an ongoing benefit arrangement, a liability is recognized for termination benefits when probable and estimable. These criteria are met when management, with the appropriate level of authority, approves and commits to its plan of action for termination; the plan identifies the employees to be terminated and their related benefits; and the plan is to be completed within one year. During periods of operations where terminations are made on an as-needed basis, absent a detailed committed plan, terminations are accounted for on an individual basis and a liability is recognized when probable and estimable. We have severance policies and plans for eligible employees.

## **Fair Value Measurements**

We are required to measure certain assets and liabilities at fair value, either upon initial measurement or for subsequent accounting or reporting. For example, fair value is used in the initial measurement of net assets acquired in a business combination; on a recurring basis in the measurement of derivative financial instruments; and on a nonrecurring basis when long-lived assets are written down to fair value when held for sale or determined to be impaired. Refer to Note 14, Fair Value Measurements, for information on the methods and assumptions used in our fair value measurements.

## **Financial Instruments**

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

We address certain financial exposures through a controlled program of risk management that includes the use of derivative financial instruments. The types of derivative financial instruments permitted for such risk management programs are specified in policies set by management. Refer to Note 13, Financial Instruments, for further detail on the types and use of derivative instruments that we enter into.

## **Table of Contents**

Major financial institutions are counterparties to all of these derivative contracts. We have established counterparty credit guidelines and only enter into transactions with financial institutions of investment grade or better. Management believes the risk of incurring losses related to credit risk is remote, and any losses would be immaterial to the consolidated financial results, financial condition, or liquidity.

We recognize derivatives on the balance sheet at fair value. On the date the derivative instrument is entered into, we generally designate the derivative as either (1) a hedge of a forecasted transaction or of the variability of cash flows to be received or paid related to a recognized asset or liability (cash flow hedge), (2) a hedge of a net investment in a foreign operation (net investment hedge), or (3) a hedge of the fair value of a recognized asset or liability or of an unrecognized firm commitment (fair value hedge).

The following details the accounting treatment of our cash flow, fair value, net investment, and non-designated hedges:

Changes in the fair value of a derivative that is designated as and meets the cash flow hedge criteria are recorded in Accumulated Other Comprehensive Income (AOCI) to the extent effective and then recognized in earnings when the hedged items affect earnings.

Changes in the fair value of a derivative that is designated as and meets all the required criteria for a fair value hedge, along with the gain or loss on the hedged asset or liability that is attributable to the hedged risk, are recorded in current period earnings.

Changes in the fair value of a derivative, foreign currency debt, and qualifying intercompany loans that are related to an outstanding borrowing from a third party that are designated as and meet all the required criteria for a hedge of a net investment are recorded as translation adjustments in AOCI.

Changes in the fair value of a derivative that is not designated as a hedge are recorded immediately in earnings.

We formally document the relationships between hedging instruments and hedged items, as well as our risk management objective and strategy for undertaking various hedge transactions. This process includes relating derivatives that are designated as fair value or cash flow hedges to specific assets and liabilities on the balance sheet or to specific firm commitments or forecasted transactions. We also formally assess, at the inception of the hedge and on an ongoing basis, whether derivatives are highly effective in offsetting changes in fair values or cash flows of the hedged item. If it is determined that a derivative is not highly effective as a hedge, or if a derivative ceases to be a highly effective hedge, we will discontinue hedge accounting with respect to that derivative prospectively.

## **Foreign Currency**

Since we do business in many foreign countries, fluctuations in currency exchange rates affect our financial position and results of operations.

In most of our foreign operations, local currency is considered the functional currency. Foreign subsidiaries translate their assets and liabilities into U.S. dollars at current exchange rates in effect at the end of the fiscal period. The gains or losses that result from this process are shown as translation adjustments in AOCI in the equity section of the balance sheet.

The revenue and expense accounts of foreign subsidiaries are translated into U.S. dollars at the average exchange rates that prevail during the period. Therefore, the U.S. dollar value of these items on the income statement fluctuates from period to period, depending on the value of the dollar against foreign currencies. Some transactions are made in currencies different from an entity's functional currency. Gains and losses from these foreign currency transactions are generally included in other income (expense), net on our consolidated income statements as they occur.

## **Environmental Expenditures**

Accruals for environmental loss contingencies are recorded when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Remediation costs are capitalized if the costs improve the Company's property as compared with the condition of the property when originally constructed or acquired, or if the costs prevent environmental contamination from future operations. We expense environmental costs related to existing conditions resulting from past or current operations and from which no current or future benefit is discernible. The amounts charged to income from continuing operations related to environmental matters totaled \$37.1 in fiscal 2013, \$44.7 in 2012, and \$34.0 in 2011.



## **Table of Contents**

The measurement of environmental liabilities is based on an evaluation of currently available information with respect to each individual site and considers factors such as existing technology, presently enacted laws and regulations, and prior experience in remediation of contaminated sites. An environmental liability related to cleanup of a contaminated site might include, for example, a provision for one or more of the following types of costs: site investigation and testing costs, cleanup costs, costs related to soil and water contamination resulting from tank ruptures, post-remediation monitoring costs, and outside legal fees. These liabilities include costs related to other potentially responsible parties to the extent that we have reason to believe such parties will not fully pay their proportionate share. They do not take into account any claims for recoveries from insurance or other parties and are not discounted.

As assessments and remediation progress at individual sites, the amount of projected cost is reviewed, and the liability is adjusted to reflect additional technical and legal information that becomes available. Management has an established process in place to identify and monitor the Company's environmental exposures. An environmental accrual analysis is prepared and maintained that lists all environmental loss contingencies, even where an accrual has not been established. This analysis assists in monitoring the Company's overall environmental exposure and serves as a tool to facilitate ongoing communication among the Company's technical experts, environmental managers, environmental lawyers, and financial management to ensure that required accruals are recorded and potential exposures disclosed.

Given inherent uncertainties in evaluating environmental exposures, actual costs to be incurred at identified sites in future periods may vary from the estimates. Refer to Note 17, Commitments and Contingencies, for additional information on the Company's environmental loss contingencies.

The accruals for environmental liabilities are reflected in the consolidated balance sheets, primarily as part of other noncurrent liabilities.

## **Litigation**

In the normal course of business, we are involved in legal proceedings. We accrue a liability for such matters when it is probable that a liability has been incurred and the amount can be reasonably estimated. When only a range of possible loss can be established, the most probable amount in the range is accrued. If no amount within this range is a better estimate than any other amount within the range, the minimum amount in the range is accrued. The accrual for a litigation loss contingency includes estimates of potential damages and other directly related costs expected to be incurred. Refer to Note 17, Commitments and Contingencies, for additional information on our current legal proceedings.

## **Share-Based Compensation**

We have various share-based compensation programs, which include stock options, deferred stock units, and restricted stock. We expense the grant-date fair value of these awards over the vesting period during which employees perform related services. Expense recognition is accelerated for retirement-eligible individuals who would meet the requirements for vesting of awards upon their retirement. We utilize a Black Scholes model to value stock option awards. Refer to Note 19, Share-Based Compensation, for further detail.

## **Income Taxes**

We account for income taxes under the liability method. Under this method, deferred tax assets and liabilities are recognized for the tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities using enacted tax rates. A principal temporary difference results from the excess of tax depreciation over book depreciation because accelerated methods of depreciation and shorter useful lives are used for income tax purposes. The cumulative impact of a change in tax rates or regulations is included in income tax expense in the period that includes the enactment date.

A tax benefit for an uncertain tax position is recognized when it is more likely than not that the position will be sustained upon examination based on its technical merits. This position is measured as the largest amount of tax benefit that is greater than 50% likely of being realized. Interest and penalties related to unrecognized tax benefits are recognized as a component of income tax expense. For additional information regarding our income taxes, refer to Note 22, Income Taxes.

## **Cash and Cash Items**

Cash and cash items include cash, time deposits, and certificates of deposit acquired with an original maturity of three months or less.



## **Table of Contents**

### **Trade Receivables, net**

Trade receivables comprise amounts owed to us through our operating activities and are presented net of allowances for doubtful accounts. The allowances for doubtful accounts represent estimated uncollectible receivables associated with potential customer defaults on contractual obligations. A provision for customer defaults is made on a general formula basis when it is determined that the risk of some default is probable and estimable but cannot yet be associated with specific customers. The assessment of the likelihood of customer defaults is based on various factors, including the length of time the receivables are past due, historical experience, and existing economic conditions. The allowances also include amounts for certain customers where a risk of default has been specifically identified, considering factors such as the financial condition of the customer and customer disputes over contractual terms and conditions. Allowances for doubtful accounts were \$101.7 and \$103.5 as of fiscal year end 30 September 2013 and 2012, respectively. Provisions to the allowances for doubtful accounts charged against income were \$27.6, \$36.8 and \$23.4 in 2013, 2012, and 2011, respectively.

### **Inventories**

Inventories are stated at the lower of cost or market. We write down our inventories for estimated obsolescence or unmarketable inventory based upon assumptions about future demand and market conditions.

We utilize the last-in, first-out (LIFO) method for determining the cost of inventories in the Merchant Gases, Tonnage Gases, and Electronics and Performance Materials segments in the United States. Inventories for these segments outside of the United States are accounted for on the first-in, first-out (FIFO) method, as the LIFO method is not generally permitted in the foreign jurisdictions where these segments operate. The inventories of the Equipment and Energy segment on a worldwide basis, as well as all other inventories, are accounted for on the FIFO basis.

At the business segment level, inventories are recorded at FIFO and the LIFO pool adjustments are not allocated to the business segments. Refer to Note 7, Inventories, for further detail.

### **Equity Investments**

The equity method of accounting is used when we exercise significant influence but do not have operating control, generally assumed to be 20% - 50% ownership. Under the equity method, original investments are recorded at cost and adjusted by our share of undistributed earnings or losses of these companies. Equity investments are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the investment may not be recoverable. Refer to Note 8, Summarized Financial Information of Equity Affiliates, for further detail.

### **Plant and Equipment**

Plant and equipment is stated at cost less accumulated depreciation. Construction costs, labor, and applicable overhead related to installations are capitalized. Expenditures for additions and improvements that extend the lives or increase the capacity of plant assets are capitalized. The costs of maintenance and repairs of plant and equipment are charged to expense as incurred.

Fully depreciated assets are retained in the gross plant and equipment and accumulated depreciation accounts until they are removed from service. In the case of disposals, assets and related depreciation are removed from the accounts, and the net amounts, less proceeds from disposal, are included in income. Refer to Note 9, Plant and Equipment, net, for further detail.

### **Computer Software**

We capitalize costs incurred to purchase or develop software for internal use. Capitalized costs include purchased computer software packages, payments to vendors/consultants for development and implementation or modification to a purchased package to meet our requirements, payroll and related costs for employees directly involved in development, and interest incurred while software is being developed. Capitalized computer software costs are included in the balance sheet classification plant and equipment, net and depreciated over the estimated useful life of the software, generally a period of three to ten years.

### **Capitalized Interest**

As we build new plant and equipment, we include in the cost of these assets a portion of the interest payments we make during the year. The amount of capitalized interest was \$25.8, \$30.2, and \$22.7 in 2013, 2012, and 2011, respectively.



**Impairment of Long-Lived Assets**

Long-lived assets are grouped for impairment testing at the lowest level for which there are identifiable cash flows and is evaluated for impairment whenever events or changes in circumstances indicate that the carrying amount of

## **Table of Contents**

an asset group may not be recoverable. We assess recoverability by comparing the carrying amount of the asset group to estimated undiscounted future cash flows expected to be generated by the asset group. If an asset group is considered impaired, the impairment loss to be recognized is measured as the amount by which the asset group's carrying amount exceeds its fair value. Long-lived assets to be sold are reported at the lower of carrying amount or fair value less cost to sell.

### **Government Grants**

We receive government grants that primarily relate to research and development projects. Government grants are recognized when there is reasonable assurance that the grant will be received and that we have complied with the conditions of the grant. Government grants related to assets are included in the balance sheet as a reduction of the cost of the asset and result in reduced depreciation expense over the useful life of the asset. Government grants that relate to expenses are recognized in the income statement as a reduction of the related expense or as a component of other income (expense), net.

### **Asset Retirement Obligations**

The fair value of a liability for an asset retirement obligation is recognized in the period in which it is incurred. The fair value of the liability is measured using discounted estimated cash flows and is adjusted to its present value in subsequent periods as accretion expense is recorded. The corresponding asset retirement costs are capitalized as part of the carrying amount of the related long-lived asset and depreciated over the asset's useful life. The Company's asset retirement obligations are primarily associated with Tonnage Gases on-site long-term supply contracts, under which the Company has built a facility on land owned by the customer and is obligated to remove the facility at the end of the contract term. The Company's asset retirement obligations totaled \$89.8 and \$76.7 at 30 September 2013 and 2012, respectively.

### **Goodwill**

Business combinations are accounted for using the acquisition method. The purchase price is allocated to the assets acquired and liabilities assumed based on their estimated fair market values. Any excess purchase price over the fair market value of the net assets acquired, including identified intangibles, is recorded as goodwill. Preliminary purchase price allocations are made at the date of acquisition and finalized when information needed to affirm underlying estimates is obtained, within a maximum allocation period of one year.

Goodwill is subject to impairment testing at least annually. In addition, goodwill is tested more frequently if a change in circumstances or the occurrence of events indicates that potential impairment exists. Refer to Note 10, Goodwill, for further detail.

### **Intangible Assets**

Intangible assets with determinable lives primarily consist of customer relationships, purchased patents and technology, and land use rights. The cost of intangible assets with determinable lives is amortized on a straight-line basis over the estimated period of economic benefit. No residual value is estimated for these intangible assets. Indefinite-lived intangible assets consist of trade names and trademarks. Indefinite-lived intangibles are subject to impairment testing at least annually. In addition, intangible assets are tested more frequently if a change in circumstances or the occurrence of events indicates that potential impairment exists.

Customer relationships are generally amortized over periods of five to twenty-five years. Purchased patents and technology and other are generally amortized over periods of five to twenty years. Land use rights, which are included in other intangibles, are generally amortized over a period of fifty years. Amortizable lives are adjusted whenever there is a change in the estimated period of economic benefit. Refer to Note 11, Intangible Assets, for further detail.

### **Retirement Benefits**

The cost of pension benefits is recognized over the employees' service period. We are required to use actuarial methods and assumptions in the valuation of defined benefit obligations and the determination of expense. Differences between actual and expected results or changes in the value of obligations and plan assets are not recognized in earnings as they occur but, rather, systematically and gradually over subsequent periods. Refer to Note 16, Retirement Benefits, for disclosures related to our pension and other postretirement benefits.

## **Table of Contents**

### **2. NEW ACCOUNTING GUIDANCE**

#### **Accounting Guidance Implemented in 2013**

##### **GOODWILL IMPAIRMENT**

In September 2011, the Financial Accounting Standards Board (FASB) issued authoritative guidance that provides an entity the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If it is determined to be more likely than not that the fair value of a reporting unit is less than its carrying amount, entities must perform the quantitative analysis of the goodwill impairment test. Otherwise, the quantitative test is optional. This guidance was effective for goodwill impairment tests performed this fiscal year and did not impact our consolidated financial statements.

##### **INDEFINITE-LIVED INTANGIBLE ASSET IMPAIRMENT**

In July 2012, the FASB amended the guidance on indefinite-lived intangible asset impairment testing to allow companies the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of an indefinite-lived asset is less than its carrying amount. If it is determined to be more likely than not that the fair value of an indefinite-lived asset is less than its carrying amount, entities must perform the quantitative analysis of the asset impairment test. Otherwise, the quantitative test is optional. This guidance was effective for indefinite-lived intangible impairment tests performed this fiscal year and did not impact our consolidated financial statements.

##### **FED FUNDS EFFECTIVE SWAP RATE**

In July 2013, the FASB issued an update permitting the use of the Fed Funds Effective Swap Rate (OIS) as an acceptable benchmark interest rate for hedge accounting purposes in addition to U.S. Treasury rates and the LIBOR swap rate. Upon issuance, this guidance was effective prospectively for qualifying new or redesignated hedging relationships entered into. This guidance did not have an impact on our consolidated financial statements.

#### **New Accounting Guidance to Be Implemented**

##### **AMOUNTS RECLASSIFIED OUT OF ACCUMULATED OTHER COMPREHENSIVE INCOME**

In February 2013, the FASB issued disclosure guidance to improve the transparency of items reclassified out of accumulated other comprehensive income to net income. The guidance requires an entity to present, in a single location, information about the amounts reclassified out of accumulated other comprehensive income, by component, including the income statement line items affected by the reclassification. This guidance will be effective for us beginning in the first quarter of our fiscal year 2014. This guidance requires additional disclosure and will not have a material impact on our consolidated financial statements upon adoption.

##### **CUMULATIVE TRANSLATION ADJUSTMENT**

In March 2013, the FASB issued an update to clarify existing guidance for the release of cumulative translation adjustments into net income when a parent sells all or a part of its investment in a foreign entity or achieves a business combination of a foreign entity in stages. This guidance will be applied prospectively and is effective for us beginning in the first quarter of our fiscal year 2015, with early adoption permitted. We do not expect this guidance to have a material impact on our consolidated financial statements.

##### **UNRECOGNIZED TAX BENEFITS**

In July 2013, the FASB issued guidance to require standard presentation of an unrecognized tax benefit when a carryforward related to net operating losses or tax credits exists. This guidance will be applied prospectively and is effective for us beginning in the first quarter of our fiscal year 2015, with early adoption permitted. We do not expect this guidance to have a material impact on our consolidated financial statements.

**Table of Contents****3. DISCONTINUED OPERATIONS**

During the second quarter of 2012, the Board of Directors authorized the sale of our Homecare business, which had previously been reported as part of the Merchant Gases operating segment.

On 30 April 2012, we sold the majority of our Homecare business to The Linde Group for sale proceeds of \$590 million (\$777). This amount included contingent proceeds of \$110 million (\$144) related to the outcome of certain tender arrangements. As of 30 September 2013, this liability is reflected in payables and accrued liabilities on our consolidated balance sheet, with payment expected in the fourth quarter of fiscal 2014. As part of the sale, we subsequently received \$32 million (\$42) of additional cash proceeds based upon collection of certain accounts receivable balances. In the third quarter of 2012, we recognized a gain of \$207.4 (\$150.3 after-tax, or \$.70 per share) on the sale of this business.

During the third quarter of 2012, an impairment charge of \$33.5 (\$29.5 after-tax, or \$.14 per share) was recorded to write down the remaining business, which is primarily in the United Kingdom and Ireland, to its estimated net realizable value. In the fourth quarter of 2013, we recorded an additional charge of \$18.7 (\$13.6 after-tax, or \$.06 per share) to update our estimate of the net realizable value as we continue to market the business for sale.

The Homecare business has been accounted for as a discontinued operation. The results of operations and cash flows of this business have been reclassified from the results of continuing operations for all periods presented. The assets and liabilities of discontinued operations have been reclassified and are segregated in the consolidated balance sheets.

The results of discontinued operations are summarized below:

	2013	2012	2011
Sales	\$52.3	\$258.0	\$408.3
Income before taxes	\$3.8	\$68.1	\$114.1
Income tax provision	.2	20.8	24.2
Income from operations of discontinued operations	3.6	47.3	89.9
Gain (loss) on sale of business and impairment/write-down, net of tax	(13.6)	120.8	
<b>Income (Loss) from Discontinued Operations, net of tax</b>	<b>\$(10.0)</b>	\$168.1	\$89.9

For the year ended 30 September 2011, the income tax provision includes a tax benefit of \$8.9, or \$.04 per share, resulting from the completion of an audit of tax years 2007 and 2008 by the U.S. Internal Revenue Service related to our previously divested U.S. Healthcare business. For additional details on this tax benefit, refer to Note 22, Income Taxes.

Assets and liabilities of discontinued operations consist of the following:

30 September	2013	2012
Trade receivables, net	\$2.5	\$15.0
Inventories		.5
Other current assets		.1
Total Current Assets	\$2.5	\$15.6
Plant and equipment, net		\$27.2
Total Noncurrent Assets	\$	\$27.2
Payables and accrued liabilities	\$2.4	\$6.0
Total Current Liabilities	\$2.4	\$6.0
Other noncurrent liabilities		\$.2
Total Noncurrent Liabilities	\$	\$.2

**Table of Contents****4. BUSINESS RESTRUCTURING AND COST REDUCTION PLANS**

We recorded charges in 2013 and 2012 for business restructuring and cost reduction plans. These charges are reflected on the consolidated income statements as Business Restructuring and Cost Reduction Plans. The charges for these plans have been excluded from segment operating income.

**2013 Plan**

During the fourth quarter of 2013, we recorded an expense of \$231.6 (\$157.9 after-tax, or \$.74 per share) reflecting actions to better align our cost structure with current market conditions. These charges include \$100.4 for asset actions and \$58.5 for the final settlement of a long-term take-or-pay silane contract primarily impacting the Electronics business due to continued weakness in the photovoltaic (PV) and light-emitting diode (LED) markets. In addition, \$71.9 was recorded for severance, benefits, and other contractual obligations associated with the elimination of approximately 700 positions and executive changes. These charges primarily impact our Merchant Gases businesses and corporate functions. The actions are in response to weaker than expected business conditions in Europe and Asia, reorganization of our operations and functional areas, and previously announced senior executive changes. The planned actions are expected to be completed by the end of fiscal year 2014.

The 2013 charges relate to the businesses at the segment level as follows: \$61.0 in Merchant Gases, \$28.6 in Tonnage Gases, \$141.0 in Electronics and Performance Materials, and \$1.0 in Equipment and Energy.

The following table summarizes the carrying amount of the accrual for the 2013 plan at 30 September 2013:

	Severance and Other Benefits	Asset Actions	Contract Actions/ Other	Total
2013 Charge	\$71.9	\$100.4	\$59.3	\$231.6
Amount reflected in pension liability	(6.9)			(6.9)
Noncash expenses		(100.4)		(100.4)
Cash expenditures	(3.0)		(58.5)	(61.5)
Currency translation adjustment	.4			.4
Accrued balance	\$62.4	\$	\$ .8	\$63.2

**2012 Plans**

In 2012, we recorded an expense of \$327.4 (\$222.4 after-tax, or \$1.03 per share) for business restructuring and cost reduction plans in our Polyurethane Intermediates (PUI), Electronics, and European Merchant businesses.

During the second quarter of 2012, we recorded an expense of \$86.8 (\$60.6 after-tax, or \$.28 per share) for actions to remove stranded costs resulting from our decision to exit the Homecare business, the reorganization of the Merchant business, and actions to right-size our European cost structure in light of the challenging economic outlook. The charge related to the businesses at the segment level as follows: \$77.3 in Merchant Gases, \$3.8 in Tonnage Gases, and \$5.7 in Electronics and Performance Materials. As of 30 September 2013, the planned actions were completed.

During the fourth quarter of 2012, we took actions to exit the PUI business to improve costs, resulting in a net expense of \$54.6 (\$34.8 after-tax, or \$.16 per share). We sold certain assets and the rights to a supply contract for \$32.7 in cash at closing. In connection with these actions, we recognized an expense of \$26.6, for the net book value of assets sold and those committed to be disposed of other than by sale. The remaining charge was primarily related to contract terminations and an environmental liability. Our PUI production facility in Pasadena, Texas is currently being dismantled, with completion expected in fiscal year 2014. The costs to dismantle are expensed as incurred and reflected in continuing operations in the Tonnage Gases business segment.

During the fourth quarter of 2012, we completed an assessment of our position in the PV market, resulting in \$186.0 of expense (\$127.0 after-tax, or \$.59 per share) primarily related to the Electronics and Performance Materials segment. Air Products supplies the PV market with both bulk and on-site supply of gases, including silane. The PV market has not developed as expected, and as a result, the market capacity to produce silane is expected to exceed demand for the foreseeable future. Included in the charge was an accrual of \$93.5 for an offer that we made to terminate a long term take-or-pay contract to purchase silane. A final settlement was reached with the supplier in the fourth quarter of 2013.



**Table of Contents**

The following table summarizes the carrying amount of the accrual for the 2012 plans at 30 September 2013:

	Severance and Other Benefits	Asset Actions	Contract Actions	Other Costs	Total
Second quarter charge-Cost reduction plan	\$80.8	\$6.0	\$	\$	\$86.8
Fourth quarter charge-PUI business actions <sup>(A)</sup>	2.7	26.6	6.5	18.8	54.6
Fourth quarter charge-PV market actions <sup>(B)</sup>		34.7	93.5	57.8	186.0
2012 Charge	\$83.5	\$67.3	\$100.0	\$76.6	\$327.4
Amount reflected in environmental liability <sup>(C)</sup>				(9.0)	(9.0)
Amount reflected in pension liability	(7.5)				(7.5)
Noncash expenses	(.4)	(67.3)		(19.3)	(87.0)
Cash expenditures	(32.8)			(.1)	(32.9)
Currency translation adjustment	(1.6)				(1.6)
30 September 2012	\$41.2	\$	\$100.0	\$48.2	\$189.4
Cash expenditures	(40.4)		(98.1)	(47.3)	(185.8)
Currency translation adjustment	.3				.3
Accrued Balance	\$1.1	\$	\$1.9	\$ .9	\$3.9

(A) Charge is net of \$32.7 in proceeds received in cash at closing for certain PUI assets and the rights to a supply contract.

(B) Other includes the write-down of inventory to its net realizable value, the write-down of accounts receivable, and expected losses on purchase commitments.

(C) Reflected in accrual for environmental obligations. See Note 17, Commitments and Contingencies.

**5. BUSINESS COMBINATIONS****2013 Business Combinations**

We completed three acquisitions in 2013. The acquisitions were accounted for as business combinations, and their results of operations were consolidated within their respective segments after the acquisition dates. The aggregate purchase price, net of cash acquired, for these acquisitions was \$233 and resulted in recognition of \$68 of goodwill, none of which is deductible for tax purposes.

On 30 August 2013, we acquired an air separation unit and integrated gases liquefier in Guiyang, China. This acquisition included a long-term sale of gas contract within our Tonnage Gases Segment and provided our Merchant Gases segment with additional liquid capacity in the region. On 31 May 2013, we acquired EPCO Carbon dioxide Products, Inc. (EPCO), the largest independent U.S. producer of liquid carbon dioxide (CO<sub>2</sub>). This acquisition expanded our North American offerings of bulk industrial process gases in the Merchant Gases segment. On 1 April 2013, we acquired Wuxi Chem-Gas Company, Ltd. (WCG). This acquisition provided our Merchant Gases segment with additional gases presence in the Jiangsu Province of China.

**2012 Business Combinations****Indura S.A.**

In July 2012, we acquired a 64.8% controlling equity interest in the outstanding shares of Indura S.A. We paid cash consideration in Chilean pesos (CLP) of 345.5 billion (\$690) and assumed debt of CLP113.8 billion (\$227) for these interests. Prior to the acquisition, Indura S.A. was the largest independent industrial gas company in South America. Indura S.A.'s integrated gas and retail business comprises packaged gases and hardgoods, liquid bulk, healthcare, and on-sites.

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Under the purchase agreement, the largest minority shareholder has a right to exercise a put option to require Air Products to purchase up to a 30.5% equity interest during the two-year period beginning on 1 July 2015, at a redemption value equal to fair market value (subject to a minimum price based upon the acquisition date value escalated by an inflation factor). Under the agreement, we also had an obligation to purchase 2.0% of the remaining shares of Indura S.A. During the third quarter of 2013, we purchased these shares for CLP5.5 billion (\$11). As of 30 September 2013, we hold a 67.2% interest in Indura S.A.

For the year ended 30 September 2012, acquisition related costs of \$11.4 were recognized for this transaction. Debt issuance costs of \$4.9 are included within interest expense and acquisition costs of \$6.5 are included within selling and administrative expenses on the consolidated income statements.



**Table of Contents**

The acquisition of Indura S.A. was accounted for as a business combination. Following the acquisition date, 100% of the Indura S.A. results were consolidated in our Merchant Gases business segment. The portion of the business that is not owned by the Company is recorded as noncontrolling interests.

The following table summarizes the fair value of identifiable assets acquired and liabilities assumed in the acquisition of Indura S.A. and the resulting goodwill as of the acquisition date:

<b>Allocation of Purchase Price</b>	
Trade receivables, net	\$131.2
Inventories	103.5
Other current assets and (liabilities) <sup>(A)</sup>	(67.5)
Plant and equipment	397.2
Intangible assets	382.1
Current portion of long-term debt and short-term borrowings	(70.8)
Long-term debt	(279.8)
Deferred income taxes	(131.3)
Other noncurrent assets and (liabilities)	(12.3)
<b>Fair Value of Identifiable Net Assets Acquired</b>	<b>\$452.3</b>
Goodwill	626.2
Noncontrolling interests (including redeemable noncontrolling interest)	(388.9)
<b>Total</b>	<b>\$689.6</b>

<sup>(A)</sup> Includes cash and cash items, prepaid expenses, other current assets, payables and accrued liabilities, and other current liabilities.

The noncontrolling interests of Indura S.A., including redeemable noncontrolling interest, were recorded on the acquisition date at fair value. Refer to Note 17, Commitments and Contingencies, and Note 20, Noncontrolling Interests, for additional information.

**Goodwill and Intangible Assets**

Goodwill of \$626.2 is attributable to expected growth and cost synergies resulting from the acquisition. The goodwill is not deductible for income tax purposes.

We acquired identifiable intangible assets, primarily in the form of customer relationships and trade names and trademarks, with a total estimated fair value of \$382.1. Customer relationships have an estimated fair value of \$287.8 and are being amortized over their estimated useful life of 23 years. Trade names and trademarks have an estimated fair value of \$92.6. Since we intend to use these for the foreseeable future, they are classified as indefinite-lived intangible assets.

**Consolidated Actual and Unaudited Pro forma Information**

For the year ended 30 September 2012, sales and net income attributable to Air Products included in our consolidated income statements reflects Indura S.A. sales of \$140.0 and net loss of \$7.6. Indura's net loss includes a non-cash charge of \$14.1 related to a Chilean tax rate change.

The unaudited pro forma results on a continuing operations basis presented below include the effects of the Indura S.A. acquisition as if it had occurred as of 1 October 2010.

Year Ended 30 September	Pro forma	
	2012	2011
Sales	\$9,952.3	\$10,144.2
Net income	1,039.0	1,181.9
Net income attributable to Air Products	1,008.6	1,137.5
Basic Earnings per Common Share attributable to Air Products	4.78	5.34

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Diluted Earnings per Common Share attributable to Air Products	4.70	5.23
--	------	------

The unaudited pro forma results are based on historical results of operations, adjusted for the allocation of purchase price and other acquisition accounting adjustments, and are not necessarily indicative of either future results of operations or results that might have been achieved had the acquisition been completed on 1 October 2010.

The unaudited pro forma results do not include any anticipated synergies or other expected benefits of the acquisition.

**Table of Contents****DA NanoMaterials LLC**

On 2 April 2012, we acquired E.I. DuPont de Nemours and Co. Inc.'s 50% interest in our joint venture, DuPont Air Products NanoMaterials LLC (DA NanoMaterials), for \$158 (\$147 net of cash acquired of \$11). The transaction was accounted for as a business combination, and beginning in the third quarter of 2012, the results of DA NanoMaterials were consolidated within our Electronics and Performance Materials business segment.

Prior to the acquisition, we accounted for our 50% interest in DA NanoMaterials as an equity-method investment. The acquisition-date fair value of the previously held equity interest was valued at \$120 and was determined using a discounted cash flow analysis under the income approach. The income approach required estimating a number of factors, including projected revenue growth, customer attrition rates, profit margin, and discount rate. The year ended 30 September 2012 includes a gain of \$85.9 (\$54.6 after-tax, or \$.25 per share) as a result of revaluing our previously held equity interest to fair value as of the acquisition date. This gain is reflected on the consolidated income statements as Gain on previously held equity interest.

**6. AIRGAS TRANSACTION**

In February 2010, we commenced a tender offer to acquire all the outstanding common stock of Airgas, Inc. (Airgas), including the associated preferred stock purchase rights. Based on a decision by the Delaware Chancery Court to uphold the decision of Airgas Board of Directors to retain the preferred stock purchase rights, we withdrew our offer on 15 February 2011.

Prior to the tender offer, we purchased approximately 1.5 million shares of Airgas stock for a total cost of \$69.6. On 16 February 2011, we sold the 1.5 million shares of Airgas stock for total proceeds of \$94.7 and recognized a gain of \$25.1 (\$15.9 after-tax, or \$.07 per share).

For the year ended 30 September 2011, a net loss of \$48.5 (\$31.6 after-tax, or \$.14 per share) was recognized related to this transaction. This amount is reflected separately on the consolidated income statement as Net loss on Airgas transaction and includes amortization of fees related to a term loan credit facility, the gain on the sale of Airgas stock, and other acquisition-related costs. In addition, cash payments for the acquisition-related costs of \$156.2 are classified as operating activities on the consolidated statements of cash flows for the year ended 30 September 2011.

**7. INVENTORIES**

The components of inventories are as follows:

<b>30 September</b>	<b>2013</b>	<b>2012</b>
Inventories at FIFO cost		
Finished goods	<b>\$527.3</b>	\$617.9
Work in process	<b>38.7</b>	36.7
Raw materials, supplies and other	<b>234.9</b>	220.0
	<b>800.9</b>	874.6
Less: Excess of FIFO cost over LIFO cost	<b>(94.8)</b>	(88.0)
	<b>\$706.1</b>	\$786.6

Inventories valued using the LIFO method comprised 36.4% and 35.6% of consolidated inventories before LIFO adjustment at 30 September 2013 and 2012, respectively. Liquidation of LIFO inventory layers in 2013, 2012, and 2011 did not materially affect the results of operations.

FIFO cost approximates replacement cost. Our inventory has a high turnover, and as a result, there is little difference between the original cost of an item and its current replacement cost.

**Table of Contents****8. SUMMARIZED FINANCIAL INFORMATION OF EQUITY AFFILIATES**

The table below presents summarized financial information on a combined 100% basis of the companies accounted for by the equity method. Amounts presented include the accounts of the following equity affiliates:

Abdullah Hashim Industrial Gases & Equipment Co., Ltd. (25%);	INOX Air Products Limited (50%);
Air Products South Africa (Proprietary) Limited (50%);	Kulim Industrial Gases Sdn. Bhd. (50%);
Bangkok Cogeneration Company Limited (49%);	Sapio Produzione Idrogeno Ossigeno S.r.l. (49%);
Bangkok Industrial Gases Co., Ltd. (49%);	SembCorp Air Products (HyCo) Pte. Ltd. (40%);
Chengdu Air & Gas Products Ltd. (50%);	Tecnologia en Nitrogeno S. de R.L. de C.V. (50%);
Daido Air Products Electronics, Inc. (20%);	Tyczka Industrie-Gases GmbH (50%);
Helap S.A. (50%);	WuXi Hi-Tech Gas Co., Ltd. (50%);
High-Tech Gases (Beijing) Co., Ltd. (50%);	and principally, other industrial gas producers.
INFRA Group (40%);	

On 29 May 2012, we purchased 25% of the outstanding shares of Abdullah Hashim Industrial Gases & Equipment Co. Ltd. (AHG) for SAR581.3 million (\$155). AHG is a company of the privately-owned Abdullah Hashim Group, based in the Kingdom of Saudi Arabia. AHG is the largest private industrial gases company in Saudi Arabia. It comprises three businesses, including industrial gases, equipment and consumables and refrigerants. The transaction was recorded as an investment in net assets of and advances to equity affiliates in the Merchant Gases segment.

In the third quarter of 2012, we obtained control of DA NanoMaterials and began consolidating its results. Refer to Note 5, Business Combinations, for additional information. The unaudited amounts presented below include the results of DA NanoMaterials for 2011.

<b>30 September</b>	<b>2013</b>	<b>2012</b>	
Current assets	<b>\$1,307.9</b>	\$1,232.9	
Noncurrent assets	<b>2,396.1</b>	2,225.3	
Current liabilities	<b>795.2</b>	726.6	
Noncurrent liabilities	<b>648.6</b>	523.9	
<b>Year Ended 30 September</b>	<b>2013</b>	2012	2011
Net sales	<b>\$2,845.9</b>	\$2,675.3	\$2,650.5
Sales less cost of sales	<b>1,003.3</b>	937.0	987.2
Operating income	<b>547.3</b>	529.7	537.0
Net income	<b>360.5</b>	347.6	351.3

Dividends received from equity affiliates were \$108.6, \$89.0, and \$105.9 in 2013, 2012, and 2011, respectively.

The investment in net assets of and advances to equity affiliates as of 30 September 2013 and 2012 included investment in foreign affiliates of \$1,191.3 and \$1,171.0, respectively.

As of 30 September 2013 and 2012, the amount of investment in companies accounted for by the equity method included goodwill in the amount of \$126.4.

**Table of Contents****9. PLANT AND EQUIPMENT, NET**

The major classes of plant and equipment are as follows:

<b>30 September</b>	Useful Life in years	<b>2013</b>	2012
Land		<b>\$240.5</b>	\$215.8
Buildings	30	<b>1,076.3</b>	1,032.8
Production facilities <sup>(A)</sup>			
Merchant Gases	15	<b>4,109.1</b>	3,552.9
Tonnage Gases	15 to 20	<b>6,769.3</b>	6,583.7
Electronics and Performance Materials	10 to 15	<b>2,193.9</b>	2,022.6
Equipment and Energy	5 to 20	<b>172.4</b>	173.9
Total production facilities		<b>13,244.7</b>	12,333.1
Distribution equipment <sup>(B)</sup>	5 to 25	<b>3,280.6</b>	3,133.7
Other machinery and equipment	10 to 25	<b>393.8</b>	310.7
Construction in progress		<b>1,294.0</b>	1,020.1
Plant and equipment, at cost		<b>19,529.9</b>	18,046.2
Less: accumulated depreciation		<b>10,555.9</b>	9,805.6
Plant and equipment, net		<b>\$8,974.0</b>	\$8,240.6

(A) Depreciable lives of production facilities related to long-term customer supply contracts are matched to the contract lives.

(B) The depreciable lives for various types of distribution equipment are 10 to 25 years for cylinders, depending on the nature and properties of the product; 20 years for tanks; 7.5 years for customer stations; and 5 to 15 years for tractors and trailers.

Depreciation expense was \$864.7, \$813.7, and \$811.7 in 2013, 2012, and 2011, respectively.

**10. GOODWILL**

Changes to the carrying amount of consolidated goodwill by segment are as follows:

	Merchant Gases	Tonnage Gases	Electronics and Performance Materials	Total
Balance at 30 September 2011	\$479.2	\$14.1	\$302.9	\$796.2
Acquisitions and adjustments	630.0		135.4	765.4
Currency translation and other	29.4	.6	6.8	36.8
Balance at 30 September 2012	\$1,138.6	\$14.7	\$445.1	\$1,598.4
Acquisitions and adjustments	73.3		2.0	75.3
Currency translation and other	(19.9)	.5	(.5)	(19.9)
<b>Balance at 30 September 2013</b>	<b>\$1,192.0</b>	<b>\$15.2</b>	<b>\$446.6</b>	<b>\$1,653.8</b>

Merchant Gases goodwill increased during 2013, primarily due to the acquisitions of EPCO and WCG during the third quarter. Merchant Gases and Electronics and Performance Materials goodwill increased during 2012 due to the acquisition of Indura S.A. and DA NanoMaterials, respectively. Refer to Note 5, Business Combinations, for further details on these acquisitions.

In the fourth quarter of 2013, we conducted the required annual test of goodwill for impairment. We determined that the fair value of each of the reporting units substantially exceeded its carrying value, and therefore there were no indications of impairment.



**Table of Contents****11. INTANGIBLE ASSETS**

The table below provides details of acquired intangible assets:

	30 September 2013			30 September 2012		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Customer relationships	\$629.2	\$(97.3)	\$531.9	\$665.3	\$(93.1)	\$572.2
Patents and technology	91.3	(52.1)	39.2	129.8	(82.0)	47.8
Other	91.5	(35.9)	55.6	82.3	(38.4)	43.9
Trade names and trademarks	90.6		90.6	97.7		97.7
	<b>\$902.6</b>	<b>\$(185.3)</b>	<b>\$717.3</b>	<b>\$975.1</b>	<b>\$(213.5)</b>	<b>\$761.6</b>

Refer to Note 1, Major Accounting Policies, for amortization periods associated with our intangible assets.

Amortization expense for intangible assets was \$42.3, \$27.1, and \$22.6 in 2013, 2012, and 2011, respectively.

Projected annual amortization expense for intangible assets as of 30 September 2013 is as follows:

2014	\$41.9
2015	40.1
2016	38.0
2017	36.6
2018	34.8
Thereafter	435.3
	<b>\$626.7</b>

**12. LEASES****Lessee Accounting**

Capital leases, primarily for the right to use machinery and equipment, are included with owned plant and equipment on the consolidated balance sheet in the amount of \$19.8 and \$13.6 at 30 September 2013 and 2012, respectively. Related amounts of accumulated depreciation are \$8.5 and \$8.8, respectively.

Operating leases principally relate to real estate and also include aircraft, distribution equipment, and vehicles. Certain leases include escalation clauses, renewal, and/or purchase options. Rent expense is recognized on a straight-line basis over the minimum lease term. Rent expense under operating leases, including month-to-month agreements, was \$98.6 in 2013, \$91.1 in 2012, and \$90.5 in 2011.

At 30 September 2013, minimum payments due under leases are as follows:

	Capital Leases	Operating Leases
2014	\$0.5	\$68.6
2015	.5	49.9
2016	.3	36.5
2017	.3	24.7
2018	.2	19.7
Thereafter		86.1
Total	<b>\$1.8</b>	<b>\$285.5</b>

**Lessor Accounting**

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

As discussed under Revenue Recognition in Note 1, Major Accounting Policies, certain contracts associated with facilities that are built to provide product to a specific customer are required to be accounted for as leases. Lease receivables, net, were included principally in noncurrent capital lease receivables on our consolidated balance sheets, with the remaining balance in current capital lease receivables.



**Table of Contents**

The components of lease receivables were as follows:

<b>30 September</b>	<b>2013</b>	2012
Gross minimum lease payments receivable	<b>\$2,253.2</b>	\$2,134.6
Unearned interest income	<b>(709.1)</b>	(743.7)
<b>Lease Receivables, net</b>	<b>\$1,544.1</b>	\$1,390.9

Lease payments collected in 2013, 2012, and 2011 were \$120.0, \$103.0, and \$84.6, respectively.

At 30 September 2013, minimum lease payments expected to be collected are as follows:

2014	\$ 136.1
2015	172.6
2016	180.0
2017	178.6
2018	177.3
Thereafter	1,408.6
<b>Total</b>	<b>\$2,253.2</b>

**13. FINANCIAL INSTRUMENTS****Currency Price Risk Management**

Our earnings, cash flows, and financial position are exposed to foreign currency risk from foreign currency denominated transactions and net investments in foreign operations. It is our policy to minimize our cash flow volatility from changes in currency exchange rates. This is accomplished by identifying and evaluating the risk that our cash flows will change in value due to changes in exchange rates and by executing the appropriate strategies necessary to manage such exposures. Our objective is to maintain economically balanced currency risk management strategies that provide adequate downside protection.

**Forward Exchange Contracts**

We enter into forward exchange contracts to reduce the cash flow exposure to foreign currency fluctuations associated with highly anticipated cash flows and certain firm commitments, such as the purchase of plant and equipment. The maximum remaining term of any forward exchange contract currently outstanding and designated as a cash flow hedge at 30 September 2013 is 3.2 years. Forward exchange contracts are also used to hedge the value of investments in certain foreign subsidiaries and affiliates by creating a liability in a currency in which we have a net equity position. The primary currency pair in this portfolio of forward exchange contracts is the Euro/U.S. dollar.

In addition to the forward exchange contracts that are designated as hedges, we utilize forward exchange contracts that are not designated as hedges. These contracts are used to economically hedge foreign currency-denominated monetary assets and liabilities, primarily working capital. The primary objective of these forward exchange contracts is to protect the value of foreign currency-denominated monetary assets and liabilities from the effects of volatility in foreign exchange rates that might occur prior to their receipt or settlement. This portfolio of forward exchange contracts comprises many different foreign currency pairs, with a profile that changes from time to time depending on business activity and sourcing decisions.

The table below summarizes our outstanding currency price risk management instruments:

<b>30 September</b>	<b>2013</b>		<b>2012</b>	
	<b>US\$ Notional</b>	<b>Years Average Maturity</b>	<b>US\$ Notional</b>	<b>Years Average Maturity</b>

<b>Forward exchange contracts</b>				
Cash flow hedges	\$2,653.4	.6	\$1,348.8	.6
Net investment hedges	1,231.8	2.4	779.2	2.5
Not designated	751.9	.1	477.7	.1
<b>Total Forward Exchange Contracts</b>	<b>\$4,637.1</b>	<b>1.0</b>	<b>\$2,605.7</b>	<b>1.0</b>

**Table of Contents**

In addition to the above, we use foreign currency-denominated debt to hedge the foreign currency exposures of our net investment in certain foreign subsidiaries. The designated foreign currency denominated debt at 30 September 2013 included 908.3 million (\$1,228.4) and at 30 September 2012 included 888.2 million (\$1,142.2).

**Debt Portfolio Management**

It is our policy to identify on a continuing basis the need for debt capital and evaluate the financial risks inherent in funding the Company with debt capital. Reflecting the result of this ongoing review, the debt portfolio and hedging program are managed with the objectives and intent to (1) reduce funding risk with respect to borrowings made by us to preserve our access to debt capital and provide debt capital as required for funding and liquidity purposes, and (2) manage the aggregate interest rate risk and the debt portfolio in accordance with certain debt management parameters.

**Interest Rate Management Contracts**

We enter into interest rate swaps to change the fixed/variable interest rate mix of our debt portfolio in order to maintain the percentage of fixed- and variable-rate debt within the parameters set by management. In accordance with these parameters, the agreements are used to manage interest rate risks and costs inherent in our debt portfolio. Our interest rate management portfolio generally consists of fixed to floating interest rate swaps (which are designated as fair value hedges), pre-issuance interest rate swaps and treasury locks (which hedge the interest rate risk associated with anticipated fixed-rate debt issuances and are designated as cash flow hedges), and floating to fixed interest rate swaps (which are designated as cash flow hedges). At 30 September 2013, the outstanding interest rate swaps were denominated in U.S. dollars and Chilean Pesos. The maximum remaining term of any interest rate swap designated as a cash flow hedge is 1.4 years. The notional amount of the interest rate swap agreements is equal to or less than the designated debt being hedged. When interest rate swaps are used to hedge variable-rate debt, the indices of the swaps and the debt to which they are designated are the same. It is our policy not to enter into any interest rate management contracts which lever a move in interest rates on a greater than one-to-one basis.

**Cross Currency Interest Rate Swap Contracts**

We enter into cross currency interest rate swap contracts when our risk management function deems necessary. These contracts may entail both the exchange of fixed- and floating-rate interest payments periodically over the life of the agreement and the exchange of one currency for another currency at inception and at a specified future date. These contracts effectively convert the currency denomination of a debt instrument into another currency in which we have a net equity position while changing the interest rate characteristics of the instrument. The contracts are used to hedge either certain net investments in foreign operations or non-functional currency cash flows related to intercompany loans. The current cross currency interest rate swap portfolio consists of fixed-to-fixed swaps between U.S. dollars and Chilean Pesos, U.S. dollars and offshore Chinese Renminbi, as well as U.S. dollars and British Pound Sterling.

The following table summarizes our outstanding interest rate management contracts and cross currency interest rate swaps:

	30 September 2013				30 September 2012			
	US\$ Notional	Pay %	Average Receive %	Years Average Maturity	US\$ Notional	Pay %	Average Receive %	Years Average Maturity
Interest rate swaps (fair value hedge)	\$300.0	LIBOR	3.61%	5.9	\$450.0	LIBOR	3.23%	4.7
Cross currency interest rate swaps (net investment hedge)	\$310.8	3.87%	.72%	2.4	\$243.5	3.95%	.96%	3.2
Interest rate swaps (cash flow hedge)	\$52.8	6.84%	5.64%	1.4	\$452.8	2.75%	Various	.6
Cross currency interest rate swaps (cash flow hedge)	\$169.3	3.48%	2.53%	4.8				

**Table of Contents**

The table below summarizes the fair value and balance sheet location of our outstanding derivatives:

	Balance Sheet Location	30 September		Balance Sheet Location	30 September	
		2013	2012		2013	2012
<b>Derivatives Designated as Hedging Instruments:</b>						
Forward exchange contracts	Other receivables	\$52.2	\$12.7	Accrued liabilities	\$22.5	\$17.0
Interest rate management contracts	Other receivables		1.1	Accrued liabilities	3.5	15.6
	Other noncurrent			Other noncurrent		
Forward exchange contracts	assets	28.7	64.3	liabilities	7.7	2.5
	Other noncurrent			Other noncurrent		
Interest rate management contracts	assets	35.4	48.6	liabilities	6.1	9.5
<b>Total Derivatives Designated as Hedging Instruments</b>		<b>\$116.3</b>	<b>\$126.7</b>		<b>\$39.8</b>	<b>\$44.6</b>
<b>Derivatives Not Designated as Hedging Instruments:</b>						
Forward exchange contracts	Other receivables	\$9.6	\$ .9	Accrued liabilities	\$1.5	\$2.2
<b>Total Derivatives</b>		<b>\$125.9</b>	<b>\$127.6</b>		<b>\$41.3</b>	<b>\$46.8</b>

Refer to Note 14, Fair Value Measurements, which defines fair value, describes the method for measuring fair value, and provides additional disclosures regarding fair value measurements.

The table below summarizes the gain or loss related to our cash flow hedges, fair value hedges, net investment hedges, and derivatives not designated as hedging instruments:

	Year Ended 30 September							
	Forward		Foreign Currency				Total	
	2013	2012	Debt		Other <sup>(A)</sup>		2013	2012
<b>Cash Flow Hedges, net of tax:</b>								
Net gain (loss) recognized in OCI (effective portion)	\$24.6	\$(14.2)	\$	\$	\$10.4	\$(7.6)	\$35.0	\$(21.8)
Net (gain) loss reclassified from OCI to sales/cost of sales (effective portion)	1.0	1.3					1.0	1.3
Net (gain) loss reclassified from OCI to other income, net (effective portion)	(23.9)	9.6			2.4		(21.5)	9.6
Net (gain) loss reclassified from OCI to interest expense (effective portion)	(.4)	(.2)			.7	1.4	.3	1.2
Net (gain) loss reclassified from OCI to other income, net (ineffective portion)		.3						.3
<b>Fair Value Hedges:</b>								
Net gain (loss) recognized in interest expense <sup>(B)</sup>	\$	\$	\$	\$	\$(19.8)	\$5.8	\$(19.8)	\$5.8
<b>Net Investment Hedges, net of tax:</b>								
Net gain (loss) recognized in OCI	\$(15.3)	\$25.0	\$(37.7)	\$11.4	\$1.8	\$(2.1)	\$(51.2)	\$34.3
<b>Derivatives Not Designated as Hedging Instruments:</b>								
Net gain (loss) recognized in other income, net <sup>(C)</sup>	\$5.3	\$(2.4)	\$	\$	\$	\$	\$5.3	\$(2.4)

<sup>(A)</sup> Other includes the impact on other comprehensive income (OCI) and earnings primarily related to interest rate swaps.

<sup>(B)</sup>

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

The impact of fair value hedges noted above was largely offset by gains and losses resulting from the impact of changes in related interest rates on recognized outstanding debt.

- (C) The impact of the non-designated hedges noted above was largely offset by gains and losses, respectively, resulting from the impact of changes in exchange rates on recognized assets and liabilities denominated in nonfunctional currencies.

## **Table of Contents**

The amount of cash flow hedges' unrealized gains and losses at 30 September 2013 that are expected to be reclassified to earnings in the next twelve months is not material.

The cash flows related to all derivative contracts are reported in the operating activities section of the consolidated statements of cash flows.

### **Credit Risk-Related Contingent Features**

Certain derivative instruments are executed under agreements that require us to maintain a minimum credit rating with both Standard & Poor's and Moody's. If our credit rating falls below this threshold, the counterparty to the derivative instruments has the right to request full collateralization on the derivatives' net liability position. The net liability position of derivatives with credit risk-related contingent features was \$10.0 as of 30 September 2013 and \$13.8 as of 30 September 2012. Because our current credit rating is above the various pre-established thresholds, no collateral has been posted on these liability positions.

### **Counterparty Credit Risk Management**

We execute financial derivative transactions with counterparties that are highly rated financial institutions, all of which are investment grade at this time. Some of our underlying derivative agreements give us the right to require the institution to post collateral if its credit rating falls below the pre-established thresholds with Standard & Poor's or Moody's. These are the same agreements referenced in Credit Risk-Related Contingent Features above. The collateral that the counterparties would be required to post was \$80.6 as of 30 September 2013 and \$90.1 as of 30 September 2012. No financial institution is required to post collateral at this time, as all have credit ratings at or above the threshold.

## **14. FAIR VALUE MEASUREMENTS**

Fair value is defined as an exit price, i.e., 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 prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows:

Level 1 Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 Inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the asset or liability.

Level 3 Inputs that are unobservable for the asset or liability based on our own assumptions (about the assumptions market participants would use in pricing the asset or liability).

The methods and assumptions used to measure the fair value of financial instruments are as follows:

### **Derivatives**

The fair value of our interest rate management contracts and forward exchange contracts are quantified using the income approach and are based on estimates using standard pricing models. These models take into account the value of future cash flows as of the balance sheet date, discounted to a present value using discount factors that match both the time to maturity and currency of the underlying instruments. The computation of the fair values of these instruments is generally performed by the Company. These standard pricing models utilize inputs which are derived from or corroborated by observable market data such as interest rate yield curves and currency spot and forward rates. In addition, on an ongoing basis, we randomly test a subset of our valuations against valuations received from the transaction's counterparty to validate the accuracy of our standard pricing models. Counterparties to these derivative contracts are highly rated financial institutions.

Refer to Note 13, Financial Instruments, for a description of derivative instruments, including details on the balance sheet line classifications.

### **Long-term Debt**

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

The fair value of our debt is based on estimates using standard pricing models that take into account the value of future cash flows as of the balance sheet date, discounted to a present value using discount factors that match both the time to maturity and currency of the underlying instruments. These standard valuation models utilize observable market data such as interest rate yield curves and currency spot rates. Therefore, the fair value of our debt is classified as a level 2 measurement. We generally perform the computation of the fair value of these instruments.

**Table of Contents**

The carrying values and fair values of financial instruments were as follows:

30 September	2013		2012	
	Carrying Value	Fair Value	Carrying Value	Fair Value
<b>Assets</b>				
Derivatives				
Forward exchange contracts	\$90.5	\$90.5	\$77.9	\$77.9
Interest rate management contracts	35.4	35.4	49.7	49.7
<b>Liabilities</b>				
Derivatives				
Forward exchange contracts	\$31.7	\$31.7	\$21.7	\$21.7
Interest rate management contracts	9.6	9.6	25.1	25.1
Long-term debt, including current portion	5,563.7	5,804.1	4,658.5	5,005.9

The carrying amounts reported in the balance sheet for cash and cash items, trade receivables, payables and accrued liabilities, accrued income taxes, and short-term borrowings approximate fair value due to the short-term nature of these instruments. Accordingly, these items have been excluded from the above table.

The following table summarizes assets and liabilities measured at fair value on a recurring basis in the consolidated balance sheets:

	30 September 2013				30 September 2012			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
<b>Assets at Fair Value</b>								
Derivatives								
Forward exchange contracts	\$90.5	\$	\$90.5	\$	\$77.9	\$	\$77.9	\$
Interest rate management contracts	35.4		35.4		49.7		49.7	
<b>Total Assets at Fair Value</b>	<b>\$125.9</b>	<b>\$</b>	<b>\$125.9</b>	<b>\$</b>	<b>\$127.6</b>	<b>\$</b>	<b>\$127.6</b>	<b>\$</b>
<b>Liabilities at Fair Value</b>								
Derivatives								
Forward exchange contracts	\$31.7	\$	\$31.7	\$	\$21.7	\$	\$21.7	\$
Interest rate management contracts	9.6		9.6		25.1		25.1	
<b>Total Liabilities at Fair Value</b>	<b>\$41.3</b>	<b>\$</b>	<b>\$41.3</b>	<b>\$</b>	<b>\$46.8</b>	<b>\$</b>	<b>\$46.8</b>	<b>\$</b>

The following is a tabular presentation of nonrecurring fair value measurements along with the level within the fair value hierarchy in which the fair value measurement in its entirety falls:

	30 September 2013				2013
	Total	Level 1	Level 2	Level 3	
Long-lived assets Cost reduction plan <sup>(A)</sup>	\$10.8	\$	\$	\$10.8	\$11.9
Long-lived assets Discontinued operations <sup>(B)</sup>					18.7
	30 September 2012				2012
	Total	Level 1	Level 2	Level 3	
Long-lived assets Cost reduction plan <sup>(A)</sup>	\$2.2	\$	\$	\$2.2	\$6.0
Long-lived assets Discontinued operations <sup>(B)</sup>	27.2			27.2	33.5

(A)



## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

In conjunction with the 2013 and 2012 business restructuring and cost reduction plans, long-lived assets held for sale were written down to fair value, and the loss was included in the respective charges. For additional information, see Note 4, Business Restructuring and Cost Reduction Plans. We quantified the fair value of the assets held for sale using a market approach, based on prices for other market transactions involving comparable assets and our assessment of value considering our knowledge of the markets.

- <sup>(B)</sup> During 2013 and 2012, impairment charges were recorded for the remaining assets of the Homecare business to reflect their estimated net realizable value. For additional information, see Note 3, Discontinued Operations. We utilized a market approach to determine the fair value based on our current assessment of the markets for these assets.

Refer to Note 1, Major Accounting Policies, for additional information on our accounting and reporting of the fair value of financial instruments.

**Table of Contents****15. DEBT**

The tables below summarize our outstanding debt at 30 September 2013 and 2012:

**Total Debt**

<b>30 September</b>	<b>2013</b>	<b>2012</b>
Short-term borrowings	<b>\$709.9</b>	\$633.4
Current portion of long-term debt	<b>507.4</b>	74.3
Long-term debt	<b>5,056.3</b>	4,584.2
<b>Total Debt</b>	<b>\$6,273.6</b>	\$5,291.9

**Short-term Borrowings**

<b>30 September</b>	<b>2013</b>	<b>2012</b>
Bank obligations	<b>\$218.9</b>	\$249.9
Commercial paper	<b>491.0</b>	383.5
<b>Total Short-term Borrowings</b>	<b>\$709.9</b>	\$633.4

The weighted average interest rate of short-term borrowings outstanding at 30 September 2013 and 2012 was 1.8% and 1.5%, respectively.

Cash paid for interest, net of amounts capitalized, was \$136.1 in 2013, \$127.6 in 2012, and \$117.4 in 2011.

**Long-term Debt**

<b>30 September</b>	<b>Fiscal Year</b>	<b>2013</b>	<b>2012</b>
<b>Payable in U.S. Dollars</b>	<b>Maturities</b>		
<b>Debentures</b>			
8.75%	2021	<b>\$18.4</b>	\$18.4
<b>Medium-term Notes</b> (weighted average rate)			
Series D 7.3%	2016	<b>32.1</b>	32.1
Series E 7.6%	2026	<b>17.2</b>	17.2
<b>Senior Notes</b>			
Note 4.15%	2013		300.0
Note 2.0%	2016	<b>350.0</b>	350.0
Note 1.2%	2018	<b>400.0</b>	400.0
Note 4.375%	2019	<b>400.0</b>	400.0
Note 3.0%	2022	<b>400.0</b>	400.0
Note 2.75%	2023	<b>400.0</b>	
<b>Other</b> (weighted average rate)			
Variable-rate industrial revenue bonds 0.1%	2021 to 2050	<b>917.1</b>	917.1
Commercial Paper 0.1%	2014	<b>400.0</b>	
Other 2.5%	2014 to 2019	<b>46.8</b>	67.8
<b>Payable in Other Currencies</b>			
Eurobonds 3.75%	2014	<b>405.7</b>	385.8
Eurobonds 3.875%	2015	<b>405.7</b>	385.8
RMB Syndicated Credit Facility 4.05%	2015	<b>40.9</b>	31.7
Eurobonds 4.625%	2017	<b>405.7</b>	385.8
Eurobonds 2.0%	2020	<b>405.7</b>	
CLP Series E bonds 6.3%	2030	<b>163.8</b>	172.6
Other 6.2%	2014 to 2021	<b>358.7</b>	396.7
<b>Capital Lease Obligations</b>			
United States 5.0%	2014 to 2018	<b>1.3</b>	1.5

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Foreign 6.0%	2014 to 2015	<b>0.3</b>	1.0
<b>Less: Unamortized discount</b>		<b>(5.7)</b>	(5.0)
Total Long-term Debt		<b>5,563.7</b>	4,658.5
Less: Current portion of long-term debt		<b>(507.4)</b>	(74.3)
<b>Long-term Debt</b>		<b>\$5,056.3</b>	\$4,584.2

**Table of Contents**

Maturities of long-term debt in each of the next five years and beyond are as follows:

2014	\$ 907.4
2015	453.0
2016	433.0
2017	453.8
2018	439.9
Thereafter	2,876.6
<b>Total</b>	<b>\$5,563.7</b>

On 4 February 2013, we issued a \$400.0 senior fixed-rate 2.75% note that matures on 3 February 2023. Additionally, on 7 August 2013, we issued a 2.0% Eurobond for 300 million (\$397) that matures on 7 August 2020.

Various debt agreements to which we are a party also include financial covenants and other restrictions, including restrictions pertaining to the ability to create property liens and enter into certain sale and leaseback transactions. As of 30 September 2013, we are in compliance with all the financial and other covenants under our debt agreements.

As of 30 September 2013, we have classified commercial paper of \$400.0 maturing in 2014 as long-term debt because we have the ability and intent to refinance the debt under our \$2,500.0 committed credit facility maturing in 2018. Our current intent is to refinance this debt via the U.S. public or private placement markets.

On 30 April 2013, we entered into a five-year \$2,500.0 revolving credit agreement with a syndicate of banks (the 2013 Credit Agreement), under which senior unsecured debt is available to us and certain of our subsidiaries. The 2013 Credit Agreement provides us with a source of liquidity and supports our commercial paper program. This agreement increases the previously existing facility by \$330.0, extends the maturity date to 30 April 2018, and modifies the financial covenant to a maximum ratio of total debt to total capitalization (total debt plus total equity plus redeemable noncontrolling interest) no greater than 70%. No borrowings were outstanding under the 2013 Credit Agreement as of 30 September 2013.

The 2013 Credit Agreement terminates and replaces our previous \$2,170.0 revolving credit agreement dated 8 July 2010, as subsequently amended, which was to mature 30 June 2015 and had a financial covenant of long-term debt divided by the sum of long-term debt plus equity of no greater than 60%. No borrowings were outstanding under the previous agreement at the time of its termination and no early termination penalties were incurred.

Effective 11 June 2012, we entered into an offshore Chinese Renminbi (RMB) syndicated credit facility of RMB1,000.0 million (\$163.5), maturing in June 2015. There are RMB250.0 million (\$40.9) in outstanding borrowings under this commitment at 30 September 2013.

Additional commitments totaling \$383.0 are maintained by our foreign subsidiaries, of which \$309.0 was borrowed and outstanding at 30 September 2013.

**Table of Contents****16. RETIREMENT BENEFITS**

The Company and certain of its subsidiaries sponsor defined benefit pension plans and defined contribution plans that cover a substantial portion of its worldwide employees. The principal defined benefit pension plans are the U.S. salaried pension plan and the U.K. pension plan. These plans were closed to new participants in 2005 and were replaced with defined contribution plans. The principal defined contribution plan is the Retirement Savings Plan, in which a substantial portion of the U.S. employees participate; a similar plan is offered to U.K. employees. We also provide other postretirement benefits consisting primarily of healthcare benefits to U.S. retirees who meet age and service requirements.

**Defined Benefit Pension Plans**

Pension benefits earned are generally based on years of service and compensation during active employment. The cost of our defined benefit pension plans included the following components:

	2013		2012		2011	
	U.S.	International	U.S.	International	U.S.	International
Service cost	\$51.8	\$31.5	\$45.1	\$24.1	\$43.6	\$29.5
Interest cost	117.1	57.3	124.2	62.3	122.8	64.2
Expected return on plan assets	(185.4)	(71.2)	(178.2)	(66.7)	(179.4)	(68.1)
Amortization						
Net actuarial loss	116.0	27.0	78.6	17.4	63.9	30.9
Prior service cost	2.9	.2	2.7	.5	2.6	.6
Settlements	11.5	.9		1.4		1.0
Special termination benefits	1.2	6.2	4.6	2.2		.3
Other		2.7		2.2		2.2
<b>Net Periodic Pension Cost</b>	<b>\$115.1</b>	<b>\$54.6</b>	<b>\$77.0</b>	<b>\$43.4</b>	<b>\$53.5</b>	<b>\$60.6</b>

Our U.S. supplemental pension plan provides for a lump sum benefit payment option at the time of retirement, or for corporate officers, six months after the retirement date. Pension settlements are recognized when cash payments exceed the sum of the service and interest cost components of net periodic pension cost of the plan for the fiscal year. We recognized \$12.4 of settlement losses in 2013. Special termination benefits for 2013 and 2012 are primarily related to the cost reduction plans initiated in their respective years.

We calculate net periodic pension cost for a given fiscal year based on assumptions developed at the end of the previous fiscal year. The following table sets forth the weighted average assumptions used in the calculation of net periodic pension cost:

	2013		2012		2011	
	U.S.	International	U.S.	International	U.S.	International
Discount rate	3.9%	4.3%	4.9%	5.5%	5.1%	4.9%
Expected return on plan assets	8.3%	6.5%	8.8%	6.6%	8.8%	6.6%
Rate of compensation increase	4.0%	3.4%	4.0%	3.8%	4.0%	3.8%

The projected benefit obligation (PBO) is the actuarial present value of benefits attributable to employee service rendered to date, including the effects of estimated future salary increases. The following table sets forth the weighted average assumptions used in the calculation of the PBO:

	2013		2012	
	U.S.	International	U.S.	International
Discount rate	4.8%	4.3%	3.9%	4.3%
Rate of compensation increase	4.0%	3.7%	4.0%	3.4%

**Table of Contents**

The following table reflects the change in the PBO and the change in the fair value of plan assets based on the plan year measurement date, as well as the amounts recognized in the consolidated balance sheets:

	2013		2012	
	U.S.	International	U.S.	International
<b>Change in Projected Benefit Obligation</b>				
Obligation at beginning of year	\$3,077.9	\$1,408.6	\$2,605.9	\$1,159.6
Service cost	51.8	31.5	45.1	24.1
Interest cost	117.1	57.3	124.2	62.3
Amendments	2.6	(4.4)	1.8	
Actuarial (gain) loss	(318.5)	113.5	400.7	182.6
Settlements	8.9	(2.8)		(4.5)
Special termination benefits	1.2	6.2	4.6	2.2
Participant contributions		2.3		3.5
Benefits paid	(131.4)	(45.2)	(104.4)	(42.2)
Currency translation/other	(.6)	18.0		21.0
<b>Obligation at End of Year</b>	<b>\$2,809.0</b>	<b>\$1,585.0</b>	<b>\$3,077.9</b>	<b>\$1,408.6</b>
<b>Change in Plan Assets</b>				
Fair value at beginning of year	\$2,099.8	\$1,139.3	\$1,844.3	\$979.4
Actual return on plan assets	313.4	117.5	348.8	120.8
Company contributions	252.4	48.4	11.1	65.3
Participant contributions		2.3		3.5
Benefits paid	(131.4)	(45.2)	(104.4)	(42.2)
Settlements		(2.8)		(4.5)
Currency translation/other		7.1		17.0
<b>Fair Value at End of Year</b>	<b>\$2,534.2</b>	<b>\$1,266.6</b>	<b>\$2,099.8</b>	<b>\$1,139.3</b>
<b>Funded Status at End of Year</b>	<b>\$(274.8)</b>	<b>\$(318.4)</b>	<b>\$(978.1)</b>	<b>\$(269.3)</b>
<b>Amounts Recognized</b>				
Noncurrent assets	\$19.4	\$1.1	\$	\$9
Accrued liabilities	(14.7)		(13.5)	
Noncurrent liabilities	(279.5)	(319.5)	(964.6)	(270.2)
<b>Net Amount Recognized</b>	<b>\$(274.8)</b>	<b>\$(318.4)</b>	<b>\$(978.1)</b>	<b>\$(269.3)</b>

The changes in plan assets and benefit obligation that have been recognized in other comprehensive income on a pretax basis during 2013 and 2012 consist of the following:

	2013		2012	
	U.S.	International	U.S.	International
Net actuarial (gain) loss arising during the period	\$(437.6)	\$67.2	\$230.0	\$128.6
Amortization of net actuarial loss	(127.5)	(27.9)	(78.6)	(18.8)
Prior service cost (credit) arising during the period	2.6	(4.4)	1.8	
Amortization of prior service cost	(2.9)	(.2)	(2.7)	(.5)
<b>Total</b>	<b>\$(565.4)</b>	<b>\$34.7</b>	<b>\$150.5</b>	<b>\$109.3</b>

The net actuarial (gain) loss represents the actual changes in the estimated obligation and plan assets that have not yet been recognized in the consolidated income statement and are included in accumulated other comprehensive loss. Actuarial gains arising during 2013 are primarily attributable to higher discount rates and higher than expected actual returns on plan assets. Actuarial gains and losses are not recognized immediately, but instead are accumulated as a part of the unrecognized net loss balance and amortized into net periodic pension cost over the average remaining service period of participating employees as certain thresholds are met.



**Table of Contents**

The components recognized in accumulated other comprehensive loss on a pretax basis at 30 September consisted of:

	2013		2012	
	U.S.	International	U.S.	International
Net actuarial loss	\$869.8	\$541.8	\$1,434.9	\$502.5
Prior service cost	13.7	1.4	14.0	6.0
Net transition liability		.4		.4
<b>Total</b>	<b>\$883.5</b>	<b>\$543.6</b>	<b>\$1,448.9</b>	<b>\$508.9</b>

The amount of accumulated other comprehensive loss at 30 September 2013 that is expected to be recognized as a component of net periodic pension cost during fiscal year 2014, excluding amounts that may be recognized through settlement losses, is as follows:

	U.S.	International
Net actuarial loss	\$83.2	\$35.1
Prior service cost	2.8	.1

The accumulated benefit obligation (ABO) is the actuarial present value of benefits attributed to employee service rendered to a particular date, based on current salaries. The ABO for all defined benefit pension plans was \$3,990.7 and \$4,012.6 at the end of 2013 and 2012, respectively.

The following table provides information on pension plans where the benefit liability exceeds the value of plan assets:

	30 September 2013		30 September 2012	
	U.S.	International	U.S.	International
<b>Pension Plans with PBO in Excess of Plan Assets:</b>				
PBO	\$2,607.6	\$1,558.7	\$3,077.9	\$1,383.3
Fair value of plan assets	2,313.4	1,239.4	2,099.8	1,113.2
<b>Pension Plans with ABO in Excess of Plan Assets:</b>				
ABO	\$139.3	\$1,401.3	\$2,738.6	\$1,249.1
Fair value of plan assets		1,205.8	2,099.8	1,113.2

Included in the tables above are several pension arrangements that are not funded because of jurisdictional practice. The ABO and PBO related to these plans for 2013 were \$143.7 and \$164.8, respectively.

**Pension Plan Assets**

Our pension plan investment strategy is to invest in diversified portfolios to earn a long-term return consistent with acceptable risk in order to pay retirement benefits and meet regulatory funding requirements while minimizing company cash contributions over time. The plans invest primarily in passive and actively managed equity and debt securities. Equity investments are diversified geographically and by investment style and market capitalization. Company stock is only included in plan assets as a component of index funds. Fixed income investments include sovereign, corporate and asset-backed securities generally denominated in the currency of the plan.

Asset allocation targets are established based on the long-term return, volatility and correlation characteristics of the asset classes, the profiles of the plans' liabilities, and acceptable levels of risk. Actual allocations vary from target due to market changes and are reviewed regularly. Assets are routinely rebalanced through contributions, benefit payments, and otherwise as deemed appropriate. The actual and target allocations at the measurement date are as follows:

Asset Category	2013 Target Allocation		2013 Actual Allocation		2012 Actual Allocation	
	U.S.	International	U.S.	International	U.S.	International



Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Equity securities	<b>60</b>	<b>80%</b>	<b>54</b>	<b>65%</b>	<b>71%</b>	<b>61%</b>	70%	57%
Debt securities	<b>20</b>	<b>30%</b>	<b>34</b>	<b>45%</b>	<b>23%</b>	<b>36%</b>	24%	39%
Real estate/other	<b>0</b>	<b>10%</b>	<b>0</b>	<b>2%</b>	<b>5%</b>	<b>1%</b>	5%	1%
Cash					<b>1%</b>	<b>2%</b>	1%	3%
<b>Total</b>					<b>100%</b>	<b>100%</b>	100%	100%

**Table of Contents**

The 8.3% expected return for U.S. plan assets is based on a weighted average of estimated long-term returns of major asset classes and the historical performance of plan assets. The estimated long-term return for equity, debt securities, and real estate is 9.3%, 5.7%, and 7.1%, respectively. In determining asset class returns, we take into account historical long-term returns and the value of active management, as well as other economic and market factors.

The 6.5% expected rate of return for International plan assets is based on a weighted average return for plans outside the U.S., which vary significantly in size, asset structure and expected returns. The expected asset return for the U.K. plan, which represents over 75% of the assets of our International plans, is 7.0% and can be derived from expected equity and debt security returns of 7.6% and 4.6%, respectively.

The following table summarizes pension plan assets measured at fair value by asset class (see Note 14, Fair Value Measurements, for definition of the levels):

	30 September 2013				30 September 2012			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
<b>U.S. Qualified Pension Plans</b>								
Cash and cash equivalents	\$10.1	\$10.1	\$	\$	\$9.9	\$9.9	\$	\$
Equity securities	764.3	764.3			645.3	645.3		
Equity mutual funds	487.0	487.0			446.0	446.0		
Equity pooled funds	561.4		561.4		370.9		370.9	
Fixed income:								
Bonds (government and corporate)	12.5		12.5		13.8		13.8	
Mortgage and asset- backed securities	14.7		14.7		12.7		12.7	
Mutual funds	24.0	24.0			23.6	23.6		
Pooled funds	527.4		527.4		462.6		462.6	
Real estate pooled funds	132.8			132.8	115.0			115.0
<b>Total U.S. Qualified Pension Plans</b>	<b>\$2,534.2</b>	<b>\$1,285.4</b>	<b>\$1,116.0</b>	<b>\$132.8</b>	<b>\$2,099.8</b>	<b>\$1,124.8</b>	<b>\$860.0</b>	<b>\$115.0</b>
<b>International Pension Plans</b>								
Cash and cash equivalents	\$16.9	\$16.9	\$	\$	\$37.8	\$37.8	\$	\$
Equity pooled funds	776.0		776.0		642.6		642.6	
Fixed income pooled funds	385.3		385.3		375.9		375.9	
Other pooled funds	20.1		10.7	9.4	19.5		10.8	8.7
Insurance contracts	68.3			68.3	63.5			63.5
<b>Total International Pension Plans</b>	<b>\$1,266.6</b>	<b>\$16.9</b>	<b>\$1,172.0</b>	<b>\$77.7</b>	<b>\$1,139.3</b>	<b>\$37.8</b>	<b>\$1,029.3</b>	<b>\$72.2</b>

**Table of Contents**

The following table summarizes changes in fair value of the pension plan assets classified as Level 3, by asset class:

	Real Estate Pooled Funds	Other Pooled Funds	Insurance Contracts	Total
<b>30 September 2011</b>	\$101.3	\$16.7	\$71.6	\$189.6
Actual return on plan assets:				
Assets held at end of year	13.7	(1.1)	(1.0)	11.6
Assets sold during the period		.3		.3
Purchases, sales, and settlements, net		(7.2)	(7.1)	(14.3)
<b>30 September 2012</b>	\$115.0	\$8.7	\$63.5	\$187.2
Actual return on plan assets:				
Assets held at end of year	17.8	1.6	5.6	25.0
Assets sold during the period		.2		.2
Purchases, sales, and settlements, net		(1.1)	(.8)	(1.9)
<b>30 September 2013</b>	<b>\$132.8</b>	<b>\$9.4</b>	<b>\$68.3</b>	<b>\$210.5</b>

The descriptions and fair value methodologies for the U.S. and International pension plan assets are as follows:

**Cash and Cash Equivalents**

The carrying amounts of cash and cash equivalents approximate fair value due to the short-term maturity.

**Equity Securities**

Equity securities are valued at the closing market price reported on a U.S. exchange where the security is actively traded and are therefore classified as Level 1 assets.

**Mutual Funds**

Shares of mutual funds are valued at their published closing net asset value (NAV) and are classified as Level 1 assets.

**Pooled Funds**

Securities are valued at the NAV of the shares held at year end, which is based on the fair value of the underlying investments, and are classified as Level 2 assets.

**Corporate and Government Bonds**

Corporate and government bonds are classified as Level 2 assets, as they are either valued at quoted market prices from observable pricing sources at the reporting date or valued based upon comparable securities with similar yields and credit ratings.

**Mortgage and Asset-Backed Securities**

Securities are classified as Level 2 assets, as they are either valued at quoted market prices from observable pricing sources at the reporting date or valued based upon comparable securities with similar yields, credit ratings, and purpose of the underlying loan.

**Real Estate Pooled Funds**

Funds are classified as Level 3 assets, as they are carried at the estimated fair value of the underlying properties. Estimated fair value is calculated utilizing a combination of key inputs, such as revenue and expense growth rates, terminal capitalization rates, and discount rates. These key inputs are consistent with practices prevailing within the real estate investment management industry.

**Other Pooled Funds**

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Securities classified as Level 2 assets are valued at the NAV of the shares held at year end, which is based on the fair value of the underlying investments. Securities and interests classified as Level 3 are carried at the estimated fair value of the underlying investments. The underlying investments are valued based on bids from brokers or other third-party vendor sources that utilize expected cash flow streams and other uncorroborated data, including counterparty credit quality, default risk, discount rates, and the overall capital market liquidity.

### **Insurance Contracts**

Insurance contracts are classified as Level 3 assets, as they are carried at contract value, which approximates the estimated fair value. The estimated fair value is based on the fair value of the underlying investment of the insurance company.

**Table of Contents****Contributions and Projected Benefit Payments**

Pension contributions of \$300.8 for fiscal year 2013 include voluntary contributions for the U.S. plans of \$220.0. These contributions resulted from an assessment of long-term funding requirements of the plans and tax planning. We anticipate contributing \$80 to \$100 to the defined benefit pension plans in 2014. These contributions are dependent upon the timing of retirements.

Projected benefit payments, which reflect expected future service, are as follows:

	U.S.	International
2014	\$115.6	\$46.4
2015	124.7	51.3
2016	130.3	53.3
2017	141.3	54.8
2018	148.8	57.7
2019 - 2023	885.2	344.1

These estimated benefit payments are based on assumptions about future events. Actual benefit payments may vary significantly from these estimates.

**Defined Contribution Plans**

We maintain a nonleveraged employee stock ownership plan (ESOP) which forms part of the Air Products and Chemicals, Inc. Retirement Savings Plan (RSP). The ESOP was established in May of 2002. The balance of the RSP is a qualified defined contribution plan including a 401(k) elective deferral component. A substantial portion of U.S. employees are eligible and participate.

We treat dividends paid on ESOP shares as ordinary dividends. Under existing tax law, we may deduct dividends which are paid with respect to shares held by the plan. Shares of the Company's common stock in the ESOP totaled 3,691,435 as of 30 September 2013.

We match a portion of the participants' contributions to the RSP and other various worldwide defined contribution plans. Our contributions to the RSP include a Company core contribution for certain eligible employees who do not receive their primary retirement benefit from the defined benefit pension plans, with the core contribution based on a percentage of pay that is dependent on years of service. For the RSP, we also make matching contributions on overall employee contributions as a percentage of the employee contribution and include an enhanced contribution for certain eligible employees that do not participate in the defined benefit pension plans. Worldwide contributions expensed to income in 2013, 2012, and 2011 were \$40.6, \$33.9, and \$31.3, respectively.

**Other Postretirement Benefits**

We provide other postretirement benefits consisting primarily of healthcare benefits to certain U.S. retirees who meet age and service requirements. The healthcare benefit is a continued medical benefit until the retiree reaches age 65. Healthcare benefits are contributory, with contributions adjusted periodically. The retiree medical costs are capped at a specified dollar amount, with the retiree contributing the remainder.

The cost of our other postretirement benefit plans includes the following components:

	2013	2012	2011
Service cost	\$4.3	\$4.5	\$5.7
Interest cost	1.9	3.9	3.3
Amortization of net actuarial loss	2.3	2.9	3.8
<b>Net Periodic Postretirement Cost</b>	<b>\$8.5</b>	<b>\$11.3</b>	<b>\$12.8</b>

We calculate net periodic postretirement cost for a given fiscal year based on assumptions developed at the end of the previous fiscal year. The discount rate assumption used in the calculation of net periodic postretirement cost for 2013, 2012, and 2011 was 1.9%, 3.7%, and 2.8%, respectively.

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

We measure the other postretirement benefits as of 30 September. The discount rate assumption used in the calculation of the accumulated postretirement benefit obligation was 2.4% and 1.9% for 2013 and 2012, respectively.

**Table of Contents**

The following table reflects the change in the accumulated postretirement benefit obligation and the amounts recognized in the consolidated balance sheets:

	2013	2012
Obligation at beginning of year	<b>\$119.9</b>	\$113.8
Service cost	<b>4.3</b>	4.5
Interest cost	<b>1.9</b>	3.9
Actuarial (gain) loss	<b>(14.5)</b>	10.2
Benefits paid	<b>(11.7)</b>	(12.5)
<b>Obligation at End of Year</b>	<b>\$99.9</b>	\$119.9
<b>Amounts Recognized</b>		
Accrued liabilities	<b>\$10.9</b>	\$12.6
Noncurrent liabilities	<b>89.0</b>	107.3

The changes in benefit obligation that have been recognized in other comprehensive income on a pretax basis during 2013 and 2012 for our other postretirement benefit plans consist of the following:

	2013	2012
Net actuarial (gain) loss arising during the period	<b>\$(14.5)</b>	\$10.2
Amortization of net actuarial loss	<b>(2.3)</b>	(2.9)
<b>Total</b>	<b>\$(16.8)</b>	\$7.3

The net actuarial loss recognized in accumulated other comprehensive loss on a pretax basis was \$19.7 at 30 September 2013 and \$36.5 at 30 September 2012. Of the 30 September 2013 net actuarial loss, it is estimated that \$1.7 will be amortized into net periodic postretirement cost during fiscal year 2014.

The assumed healthcare trend rates are as follows:

	2013	2012
Healthcare trend rate	<b>7.5%</b>	8.0%
Ultimate trend rate	<b>5.0%</b>	5.0%
Year the ultimate trend rate is reached	<b>2019</b>	2019

The effect of a change in the healthcare trend rate is tempered by a cap on the average retiree medical cost. The impact of a one percentage point change in the assumed healthcare cost trend rate on net periodic postretirement cost and the obligation is not material.

Projected benefit payments are as follows:

2014	\$ 11.1
2015	10.9
2016	11.0
2017	10.8
2018	10.6
2019 - 2023	46.3

These estimated benefit payments are based on assumptions about future events. Actual benefit payments may vary significantly from these estimates.





---

**Table of Contents****17. COMMITMENTS AND CONTINGENCIES****Litigation**

We are involved in various legal proceedings, including competition, environmental, health, safety, product liability, and insurance matters. In September 2010, the Brazilian Administrative Council for Economic Defense (CADE) issued a decision against our Brazilian subsidiary, Air Products Brasil Ltda., and several other Brazilian industrial gas companies for alleged anticompetitive activities. CADE imposed a civil fine of R\$179.2 million (approximately \$81 at 30 September 2013) on Air Products Brasil Ltda. This fine was based on a recommendation by a unit of the Brazilian Ministry of Justice whose investigation began in 2003, alleging violation of competition laws with respect to the sale of industrial and medical gases. The fines are based on a percentage of our total revenue in Brazil in 2003.

We have denied the allegations made by the authorities and filed an appeal in October 2010 with the Brazilian courts. Certain of our defenses, if successful, could result in the matter being dismissed with no fine against us. We, with advice of our outside legal counsel, have assessed the status of this matter and have concluded that, although an adverse final judgment after exhausting all appeals is reasonably possible, such a judgment is not probable. As a result, no provision has been made in the consolidated financial statements. We estimate the maximum possible loss to be the full amount of the fine of R\$179.2 million (approximately \$81 at 30 September 2013) plus interest accrued thereon until final disposition of the proceedings.

We are required to provide security for the payment of the fine (and interest) in order to suspend execution of the judgment during the appeal process, during which time interest will accrue on the fine. The security is only collectible by the court in the event we are not successful in our appeal and do not timely pay the fine. The security could be in the form of a bank guarantee or in other forms which the courts deem acceptable. The form of security to be provided by us has not been finally determined.

While we do not expect that any sums we may have to pay in connection with this or any other legal proceeding would have a material adverse effect on our consolidated financial position or net cash flows, a future charge for regulatory fines or damage awards could have a significant impact on our net income in the period in which it is recorded.

**Environmental**

In the normal course of business, we are involved in legal proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA: the federal Superfund law), Resource Conservation and Recovery Act (RCRA), and similar state and foreign environmental laws relating to the designation of certain sites for investigation or remediation. Presently, there are approximately 33 sites on which a final settlement has not been reached where we, along with others, have been designated a potentially responsible party by the Environmental Protection Agency or are otherwise engaged in investigation or remediation, including cleanup activity at certain of our current and former manufacturing sites. We continually monitor these sites for which we have environmental exposure.

Accruals for environmental loss contingencies are recorded when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated consistent with the policy set forth in Note 1, Major Accounting Policies, to the consolidated financial statements. The consolidated balance sheets at 30 September 2013 and 2012 included an accrual of \$86.7 and \$87.5, respectively, primarily as part of other noncurrent liabilities. The environmental liabilities will be paid over a period of up to 30 years. We estimate the exposure for environmental loss contingencies to range from \$86 to a reasonably possible upper exposure of \$100 as of 30 September 2013.

Actual costs to be incurred at identified sites in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures. Using reasonably possible alternative assumptions of the exposure level could result in an increase to the environmental accrual. Due to the inherent uncertainties related to environmental exposures, a significant increase to the reasonably possible upper exposure level could occur if a new site is designated, the scope of remediation is increased, a different remediation alternative is identified, or a significant increase in our proportionate share occurs. We do not expect that any sum we may have to pay in connection with environmental matters in excess of the amounts recorded or disclosed above would have a material adverse impact on our financial position or results of operations in any one year.

---

**Table of Contents**

**PACE**

At 30 September 2013, \$33.0 of the environmental accrual was related to the Pace facility.

In 2006, we sold our Amines business, which included operations at Pace, Florida and recognized a liability for retained environmental obligations associated with remediation activities at Pace. We are required by the Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (USEPA) to continue our remediation efforts. We estimated that it would take about 20 years to complete the groundwater remediation, and the costs through completion were estimated to range from \$42 to \$52. As no amount within the range was a better estimate than another, we recognized a pretax expense in fiscal 2006 of \$42.0 as a component of income from discontinued operations and recorded an environmental accrual of \$42.0 in continuing operations on the consolidated balance sheets. There has been no change to the estimated exposure range related to the Pace facility.

We have implemented many of the remedial corrective measures at the Pace, Florida facility required under 1995 Consent Orders issued by the FDEP and the USEPA. Contaminated soils have been bioremediated, and the treated soils have been secured in a lined on-site disposal cell. Several groundwater recovery systems have been installed to contain and remove contamination from groundwater. We completed an extensive assessment of the site to determine how well existing measures are working, what additional corrective measures may be needed, and whether newer remediation technologies that were not available in the 1990s might be suitable to more quickly and effectively remove groundwater contaminants. Based on assessment results, we completed a focused feasibility study that appears to have identified new and alternative approaches that should more effectively remove contaminants and achieve the targeted remediation goals. We continue to review the new approaches with the FDEP.

**PIEDMONT**

At 30 September 2013, \$19.5 of the environmental accrual was related to the Piedmont site.

On 30 June 2008, we sold our Elkton, Maryland, and Piedmont, South Carolina, production facilities and the related North American atmospheric emulsions and global pressure sensitive adhesives businesses. In connection with the sale, we recognized a liability for retained environmental obligations associated with remediation activities at the Piedmont site. This site is under active remediation for contamination caused by an insolvent prior owner. The sale of the site triggered expense recognition. Prior to the sale, remediation costs had been capitalized since they improved the property as compared to its condition when originally acquired. We are required by the South Carolina Department of Health and Environmental Control to address both contaminated soil and groundwater. Numerous areas of soil contamination have been addressed, and contaminated groundwater is being recovered and treated. We estimate that it will take until 2017 to complete source area remediation and another 15 years thereafter to complete groundwater recovery, with costs through completion estimated to be \$24. We recognized a pretax expense in 2008 of \$24.0 as a component of income from discontinued operations and recorded an environmental liability of \$24.0 in continuing operations on the consolidated balance sheets. There has been no change to the estimated exposure.

**PAULSBORO**

At 30 September 2013, \$6.1 of the environmental accrual was related to the Paulsboro site.

During the first quarter of 2009, management committed to a plan to sell the production facility in Paulsboro, New Jersey and recognized a \$16.0 environmental liability associated with this site. The change in the liability balance since it was established is a result of spending and changes in the estimated exposure. In December 2009, we completed the sale of this facility. We are required by the New Jersey state law to investigate and, if contaminated, remediate a site upon its sale. We estimate that it will take several years to complete the investigation/remediation efforts at this site.

**PASADENA**

At 30 September 2013, \$12.7 of the environmental accrual was related to the Pasadena site.

During the fourth quarter of 2012, management committed to permanently shutting down our PUI production facility in Pasadena, Texas. In shutting down and dismantling the facility, we will undertake certain remediation obligations related to soil and groundwater contaminants. We have been pumping and treating the groundwater to control off-site migration of contaminated groundwater in compliance with regulatory requirements and under the approval of the Texas Commission on Environmental Quality (TCEQ). We estimate that we will continue this program for



**Table of Contents**

30 years subsequent to the shutdown of the PUI production facility. In addition, we will perform additional work to address other environmental obligations at the site. This additional work includes addressing the RCRA permitted hazardous waste management units, investigating other potential solid waste management units, performing post closure care for two closed RCRA surface impoundment units and establishing engineering controls. In 2012, we estimated the total exposure at this site to be \$13.0. There has been no change to the estimated exposure.

**Asset Retirement Obligations**

The Company's asset retirement obligations are primarily associated with Tonnage Gases on-site long-term supply contracts, under which the Company has built a facility on land owned by the customer and is obligated to remove the facility at the end of the contract term. The retirement of assets includes the contractually required removal of a long-lived asset from service, and encompasses the sale, removal, abandonment, recycling, or disposal of the assets as required at the end of the contract terms. The timing and/or method of settlement of these obligations are conditional on a future event that may or may not be within our control.

Changes to the carrying amount of our asset retirement obligations are as follows:

Balance at 30 September 2011	\$ 63.4
Additional accruals	15.0
Liabilities settled	(5.7)
Accretion expense	3.4
Currency translation adjustment	.6
Balance at 30 September 2012	\$76.7
Additional accruals	12.9
Liabilities settled	(3.6)
Accretion expense	3.4
Currency translation adjustment	.4
<b>Balance at 30 September 2013</b>	<b>\$89.8</b>

These obligations are primarily reflected in other noncurrent liabilities on the consolidated balance sheets.

**Guarantees and Warranties**

We are a party to certain guarantee agreements, including debt guarantees of equity affiliates and equity support agreements. These guarantees are contingent commitments that are related to activities of our primary businesses.

We have guaranteed repayment of some additional borrowings of certain unconsolidated equity affiliates. At 30 September 2013, these guarantees have terms in the range of one to eight years, with maximum potential payments of \$4.7.

We have entered into an equity support agreement and operations guarantee related to an air separation facility constructed in Trinidad for a venture in which we own 50%. At 30 September 2013, maximum potential payments under joint and several guarantees were \$49.5. Exposures under the guarantee decline over time and will be completely extinguished by 2024.

To date, no equity contributions or payments have been required since the inception of these guarantees. The fair value of the above guarantees is not material.

We, in the normal course of business operations, have issued product warranties in our Equipment business. Also, contracts often contain standard terms and conditions which typically include a warranty and indemnification to the buyer that the goods and services purchased do not infringe on third-party intellectual property rights. The provision for estimated future costs relating to warranties is not material to the consolidated financial statements.

We do not expect that any sum we may have to pay in connection with guarantees and warranties will have a material adverse effect on our consolidated financial condition, liquidity, or results of operations.

**Put Option Agreements**

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

In 2002, we entered into a put option agreement as part of the purchase of an additional interest in San Fu Gas Company, Ltd., renamed Air Products San Fu Company, Ltd. (San Fu), an industrial gas company in Taiwan. Currently, we have an ownership interest of 74% in San Fu. Put options were issued which give other shareholders the right to sell San Fu stock to us at market price when exercised. The options are effective through January 2015 and allow for the sale of all stock owned by other shareholders to us. We account for put options as contingent

**Table of Contents**

liabilities to purchase an asset. Since the inception of these agreements and through 30 September 2013, we determined that we were not certain that these options would be exercised by the other shareholders. The estimated U.S. dollar price of purchasing the stock owned by other shareholders based on the exchange rate at 30 September 2013 would be approximately \$275.

In July 2012, we entered into an agreement that provides the largest minority shareholder of Indura S.A. a right to exercise a put option to require Air Products to purchase up to a 30.5% equity interest (approximately 16.3 million shares) during the two-year period beginning on 1 July 2015. We determined that the put option is embedded within minority interest shares that are subject to the put option. Therefore, the put option is accounted for within Redeemable Noncontrolling Interest in our consolidated balance sheets. Refer to Note 5, Business Combinations, and Note 20, Noncontrolling Interests, for further details.

**Unconditional Purchase Obligations**

We are obligated to make future payments under unconditional purchase obligations as summarized below:

2014	\$ 821
2015	104
2016	104
2017	80
2018	65
Thereafter	296
<b>Total</b>	<b>\$1,470</b>

Approximately \$700 of our long-term unconditional purchase obligations relate to feedstock supply for numerous HyCO (hydrogen, carbon monoxide, and syngas) facilities. The price of feedstock supply is principally related to the price of natural gas. However, long-term take-or-pay sales contracts to HyCO customers are generally matched to the term of the feedstock supply obligations and provide recovery of price increases in the feedstock supply. Due to the matching of most long-term feedstock supply obligations to customer sales contracts, we do not believe these purchase obligations would have a material effect on our financial condition or results of operations.

The unconditional purchase obligations also include other product supply and purchase commitments and electric power and natural gas supply purchase obligations, which are primarily pass-through contracts with our customers. In addition, purchase commitments to spend approximately \$625 for additional plant and equipment are included in the unconditional purchase obligations in 2014.

**18. CAPITAL STOCK****Common Stock**

Authorized common stock consists of 300 million shares with a par value of \$1 per share. As of 30 September 2013, 249 million shares were issued, with 211 million outstanding.

On 15 September 2011, the Board of Directors authorized the repurchase of up to \$1,000 of our outstanding common stock. We repurchase shares pursuant to Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended, through repurchase agreements established with several brokers. During fiscal year 2013, we purchased 5.7 million of our outstanding shares at a cost of \$461.6. At 30 September 2013, \$485.3 in share repurchase authorization remains.

The following table reflects the changes in common shares:

Year ended 30 September	2013	2012	2011
<b>Number of Common Shares Outstanding</b>			
Balance, beginning of year	212,475,880	210,185,256	213,802,865
Purchase of treasury shares	(5,721,017)	(594,916)	(7,433,612)
Issuance of treasury shares for stock option and award plans	4,424,394	2,885,540	3,816,003
Balance, end of year	211,179,257	212,475,880	210,185,256



**Table of Contents****Preferred Stock**

Authorized preferred stock consists of 25 million shares with a par value of \$1 per share, of which 2.5 million have been designated as Series A Junior Participating Preferred Stock in accordance with the Shareholder Rights Plan discussed below. At 30 September 2013, no shares of the preferred stock were issued or outstanding.

**Shareholder Rights Plan**

On 24 July 2013, the Board of Directors unanimously adopted a limited duration Shareholder Rights Plan under which common stockholders receive an associated right to purchase one one-thousandth (1/1,000) of a share of Series A Junior Participating Preferred Stock. These rights will trade with the shares of our common stock and will be exercisable at a price of \$300.00 in the event of certain changes in beneficial ownership of the Company.

Under the Shareholder Rights Plan, the rights generally will become exercisable only if a person or group acquires beneficial ownership of 10 percent (or 20 percent in the case of institutional investors filing on Schedule 13G) or more of our common stock in a transaction not approved by our Board of Directors (an Acquiring Person). In that situation, each holder of a right (other than the Acquiring Person) will have the right to purchase, at the exercise price, common shares having a market value equal to twice the exercise price. In addition, in the event of a merger or business combination with the Acquiring Person, each holder of the right will thereafter have the right to purchase, at the exercise price, common shares of the Acquiring Person having a market value equal to twice the exercise price. The rights will expire on 24 July 2014 unless redeemed earlier by the Company for \$0.001 per right.

**19. SHARE-BASED COMPENSATION**

We have various share-based compensation programs, which include stock options, deferred stock units, and restricted stock. Under all programs, the terms of the awards are fixed at the grant date. We issue shares from treasury stock upon the exercise of stock options, the payout of deferred stock units, and the issuance of restricted stock awards. As of 30 September 2013, there were 6,610,360 shares available for future grant under our Long-Term Incentive Plan, which is shareholder approved.

Share-based compensation cost recognized in the consolidated income statements is summarized below:

	2013	2012	2011
<b>Before-Tax Share-Based Compensation Cost</b>	<b>\$43.5</b>	\$43.8	\$44.8
Income tax benefit	(15.7)	(15.7)	(17.1)
<b>After-Tax Share-Based Compensation Cost</b>	<b>\$27.8</b>	\$28.1	\$27.7

Before-tax share-based compensation cost is primarily included in selling and administrative expense on our consolidated income statements. The amount of share-based compensation cost capitalized in 2013, 2012, and 2011 was not material.

Total before-tax share-based compensation cost by type of program was as follows:

	2013	2012	2011
Stock options	\$21.5	\$22.1	\$21.4
Deferred stock units	19.6	19.5	20.8
Restricted stock	2.4	2.2	2.6
<b>Before-Tax Share-Based Compensation Cost</b>	<b>\$43.5</b>	\$43.8	\$44.8



**Table of Contents****Stock Options**

We have granted awards of options to purchase common stock to executives and selected employees. The exercise price of stock options equals the market price of our stock on the date of the grant. Options generally vest incrementally over three years, and remain exercisable for ten years from the date of grant.

Fair values of stock options were estimated using a Black Scholes model that used the assumptions noted in the table below. Expected volatility and expected dividend yield are based on actual historical experience of our stock and dividends over the historical period equal to the expected life. The expected life represents the period of time that options granted are expected to be outstanding based on an analysis of Company-specific historical exercise data. The range given below results from certain groups of employees exhibiting different behavior. Groups of employees that have similar historical exercise behavior were considered separately for valuation purposes. The risk-free rate is based on the U.S. Treasury Strips with terms equal to the expected time of exercise as of the grant date.

	2013		2012		2011	
Expected volatility	28.6%	30.4%	29.0%	30.4%	29.2%	30.0%
Expected dividend yield	2.4%		2.3%		2.2%	
Expected life (in years)	7.3	9.1	7.3	9.0	7.0	8.7
Risk-free interest rate	1.2%	1.5%	1.7%	2.1%	2.4%	2.9%

The weighted average grant-date fair value of options granted during 2013, 2012, and 2011 was \$19.85, \$21.43, and \$23.83, per option, respectively.

A summary of stock option activity is presented below:

Stock Options	Shares (000)	Weighted Average Exercise Price
Outstanding at 30 September 2012	11,835	\$67.79
Granted	1,140	81.76
Exercised	(4,263)	55.17
Forfeited/Expired	(100)	85.37
<b>Outstanding at 30 September 2013</b>	<b>8,612</b>	<b>\$75.69</b>
<b>Exercisable at 30 September 2013</b>	<b>6,531</b>	<b>\$73.23</b>
Stock Options	Weighted Average Remaining Contractual Terms (in years)	Aggregate Intrinsic Value
<b>Outstanding at 30 September 2013</b>	<b>5.3</b>	<b>\$268</b>
<b>Exercisable at 30 September 2013</b>	<b>4.3</b>	<b>\$218</b>

The aggregate intrinsic value represents the amount by which our closing stock price of \$106.57 as of 30 September 2013 exceeds the exercise price multiplied by the number of in-the-money options outstanding or exercisable.

The total intrinsic value of stock options exercised during 2013, 2012, and 2011 was \$170.4, \$110.6, and \$180.8, respectively.

Compensation cost is generally recognized over the stated vesting period consistent with the terms of the arrangement (i.e., either on a straight-line or graded-vesting basis). Expense recognition is accelerated for retirement-eligible individuals who would meet the requirements for vesting of awards upon their retirement. As of 30 September 2013, there was \$9.7 of unrecognized compensation cost related to nonvested stock options, which is expected to be recognized over a weighted average period of 2.0 years.

Cash received from option exercises during 2013 was \$226.4. The total tax benefit realized from stock option exercises in 2013 was \$61.6, of which \$34.0 was the excess tax benefit.



**Table of Contents****Deferred Stock Units and Restricted Stock**

The grant-date fair value of deferred stock units and restricted stock is estimated on the date of grant based on the market price of the stock, and compensation cost is generally amortized to expense on a straight-line basis over the vesting period during which employees perform related services. Expense recognition is accelerated for retirement-eligible individuals who would meet the requirements for vesting of awards upon their retirement.

**Deferred Stock Units**

We have granted deferred stock units to executives, selected employees, and outside directors. These deferred stock units entitle the recipient to one share of common stock upon vesting, which is conditioned on continued employment during the deferral period and may also be conditioned on achieving certain performance targets. The deferral period for some units ends after death, disability, or retirement. The deferral period for other performance-based deferred stock units ends at the end of the performance period (one to three years). Additionally, we have granted deferred stock units, subject to a three-, four-, or five-year deferral period, to selected employees. Deferred stock units issued to directors are paid after service on the Board of Directors ends at the time elected by the director (not to exceed 10 years after service ends).

<b>Deferred Stock Units</b>	<b>Shares (000)</b>	<b>Weighted Average Grant-Date Fair Value</b>
Outstanding at 30 September 2012	1,416	\$69.09
Granted	264	82.78
Paid out	(393)	56.36
Forfeited/adjustments	(23)	83.23
<b>Outstanding at 30 September 2013</b>	<b>1,264</b>	<b>\$75.64</b>

Cash payments made for deferred stock units were \$1.9, \$1.8, and \$1.0 in 2013, 2012, and 2011, respectively. As of 30 September 2013, there was \$24.3 of unrecognized compensation cost related to deferred stock units. The cost is expected to be recognized over a weighted average period of 2.4 years. The total fair value of deferred stock units paid out during 2013, 2012, and 2011, including shares vested in prior periods, was \$32.3, \$22.0, and \$26.3, respectively.

**Restricted Stock**

We have issued shares of restricted stock to certain officers. Participants are entitled to cash dividends and to vote their respective shares. Shares granted since 2007 vest in four years or upon earlier retirement, death, or disability. Shares granted prior to 2007 are subject to forfeiture if employment is terminated other than due to death, disability, or retirement. The shares are nontransferable while subject to forfeiture.

<b>Restricted Stock</b>	<b>Shares (000)</b>	<b>Weighted Average Grant-Date Fair Value</b>
Outstanding at 30 September 2012	143	\$73.61
Granted	34	81.57
Vested	(53)	67.12
<b>Outstanding at 30 September 2013</b>	<b>124</b>	<b>\$78.51</b>

As of 30 September 2013, there was \$1.9 of unrecognized compensation cost related to restricted stock awards. The cost is expected to be recognized over a weighted average period of 2.3 years. The total fair value of restricted stock vested during 2013, 2012, and 2011 was \$4.4, \$2.0, and \$1.6, respectively.

**Table of Contents****20. NONCONTROLLING INTERESTS****INDURA S.A.****Redeemable Noncontrolling Interest**

The largest minority shareholder in Indura S.A. has the right to exercise a put option to require us to purchase up to a 30.5% equity interest during the two-year period beginning on 1 July 2015, at a redemption value equal to fair market value (subject to a minimum price based upon the acquisition date value escalated by an inflation factor). We determined that the put option is embedded within the minority interest shares that are subject to the put option. The redemption feature requires classification of the minority shareholder's interest in the consolidated balance sheet outside of equity under the caption Redeemable Noncontrolling Interest.

The redeemable noncontrolling interest of Indura S.A. was recorded on the acquisition date based on the estimated fair value of the shares including the embedded put option. As Indura S.A. shares are not publicly traded, the fair value of the shares was estimated based on trading multiples for similar companies in the Chilean stock market and recent transactions. The fair value of the put option was estimated using standard equity option pricing techniques, expected dividend payouts, and assumptions that market participants would use regarding equity volatility and the risk-free rate of return. Subsequent adjustments to the value of the redeemable noncontrolling interest due to the redemption feature, if any, will be recognized as they occur and recorded within capital in excess of par value.

The following is a rollforward of the redeemable noncontrolling interest:

Balance at 30 September 2011	\$
Indura acquisition	374.1
Net loss	(2.4)
Currency translation adjustment	20.8
Balance at 30 September 2012	\$392.5
Net income	8.1
Dividends	(1.1)
Currency translation adjustment	(23.7)
<b>Balance at 30 September 2013</b>	<b>\$375.8</b>

As redeemable noncontrolling interest is not part of total equity, the impacts above are excluded from our consolidated statements of equity.

**21. EARNINGS PER SHARE**

The following table sets forth the computation of basic and diluted earnings per share (EPS):

<b>30 September</b>	<b>2013</b>	2012	2011
<b>Numerator</b>			
Income from continuing operations	<b>\$1,004.2</b>	\$999.2	\$1,134.3
Income (Loss) from discontinued operations	<b>(10.0)</b>	168.1	89.9
<b>Net Income Attributable to Air Products</b>	<b>\$994.2</b>	\$1,167.3	\$1,224.2
<b>Denominator (in millions)</b>			
Weighted average common shares - Basic	<b>209.7</b>	211.2	213.0
Effect of dilutive securities			
Employee stock option and other award plans	<b>2.6</b>	3.5	4.6
Weighted average common shares - Diluted	<b>212.3</b>	214.7	217.6
<b>Basic EPS Attributable to Air Products</b>			
Income from continuing operations	<b>\$4.79</b>	\$4.73	\$5.33
Income (Loss) from discontinued operations	<b>(.05)</b>	.80	.42
<b>Net Income Attributable to Air Products</b>	<b>\$4.74</b>	\$5.53	\$5.75
<b>Diluted EPS Attributable to Air Products</b>			

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Income from continuing operations	<b>\$4.73</b>	\$4.66	\$5.22
Income (Loss) from discontinued operations	<b>(.05)</b>	.78	.41
<b>Net Income Attributable to Air Products</b>	<b>\$4.68</b>	\$5.44	\$5.63

**Table of Contents**

Diluted EPS attributable to Air Products reflects the potential dilution that could occur if stock options or other share-based awards were exercised or converted into common stock. The dilutive effect is computed using the treasury stock method, which assumes all share-based awards are exercised and the hypothetical proceeds from exercise are used by the Company to purchase common stock at the average market price during the period. The incremental shares (difference between shares assumed to be issued versus purchased), to the extent they would have been dilutive, are included in the denominator of the diluted EPS calculation. Options on 2.1 million shares, 3.6 million shares, and 2.1 million shares were antidilutive and therefore excluded from the computation of diluted EPS for 2013, 2012, and 2011, respectively.

**22. INCOME TAXES**

The following table summarizes the income of U.S. and foreign operations before taxes:

	2013	2012	2011
<b>Income from Continuing Operations before Taxes</b>			
United States	\$428.5	\$518.6	\$625.5
Foreign	754.1	640.1	767.1
Income from equity affiliates	167.8	153.8	154.3
<b>Total</b>	<b>\$1,350.4</b>	<b>\$1,312.5</b>	<b>\$1,546.9</b>

The following table shows the components of the provision for income taxes:

	2013	2012	2011
<b>Current Tax Provision</b>			
Federal	\$97.6	\$43.1	\$14.7
State	6.5	9.6	20.1
Foreign	191.0	173.9	153.8
	295.1	226.6	188.6
<b>Deferred Tax Provision</b>			
Federal	27.7	76.5	181.6
State	(7.8)	4.0	2.6
Foreign	(7.1)	(19.8)	2.5
	12.8	60.7	186.7
<b>Income Tax Provision</b>	<b>\$307.9</b>	<b>\$287.3</b>	<b>\$375.3</b>

A reconciliation of the differences between the United States federal statutory tax rate and the effective tax rate is as follows:

(Percent of income before taxes)	2013	2012	2011
U.S. federal statutory tax rate	35.0%	35.0%	35.0%
State taxes, net of federal benefit	.5	.7	1.0
Income from equity affiliates	(4.3)	(4.0)	(3.3)
Foreign taxes and credits	(6.9)	(8.6)	(7.1)
Domestic production activities	(.6)	(.9)	(.6)
Tax audit settlements and adjustments		(1.1)	(1.1)
Other	(.9)	.8	.4
<b>Effective Tax Rate</b>	<b>22.8%</b>	<b>21.9%</b>	<b>24.3%</b>

Income tax payments, net of refunds, were \$325.5 in 2013, \$255.7 in 2012, and \$159.9 in 2011.

**Table of Contents**

The significant components of deferred tax assets and liabilities are as follows:

<b>30 September</b>	<b>2013</b>	2012
<b>Gross Deferred Tax Assets</b>		
Retirement benefits and compensation accruals	<b>\$347.2</b>	\$520.4
Tax loss carryforwards	<b>53.3</b>	57.4
Tax credits and other tax carryforwards	<b>66.6</b>	52.8
Reserves and accruals	<b>140.3</b>	188.9
Asset impairment		25.4
Currency losses	<b>34.8</b>	
Other	<b>40.1</b>	43.2
Valuation allowance	<b>(44.7)</b>	(36.6)
<b>Deferred Tax Assets</b>	<b>637.6</b>	851.5
<b>Gross Deferred Tax Liabilities</b>		
Plant and equipment	<b>1,066.4</b>	1,089.5
Currency gains		20.3
Unremitted earnings of foreign entities	<b>80.6</b>	71.9
Intangible assets	<b>135.5</b>	135.3
Other	<b>17.8</b>	10.2
<b>Deferred Tax Liabilities</b>	<b>1,300.3</b>	1,327.2
<b>Net Deferred Income Tax Liability</b>	<b>\$662.7</b>	\$475.7

Deferred tax assets and liabilities are included within the consolidated financial statements as follows:

	<b>2013</b>	2012
<b>Deferred Tax Assets</b>		
Other receivables and current assets	<b>\$115.3</b>	\$129.0
Other noncurrent assets	<b>53.1</b>	73.7
<b>Total Deferred Tax Assets</b>	<b>168.4</b>	202.7
<b>Deferred Tax Liabilities</b>		
Payables and accrued liabilities	<b>3.9</b>	7.6
Deferred income taxes	<b>827.2</b>	670.8
<b>Total Deferred Tax Liabilities</b>	<b>831.1</b>	678.4
<b>Net Deferred Income Tax Liability</b>	<b>\$662.7</b>	\$475.7

The increase in net deferred income tax liability primarily resulted from decreases in liability associated with retirement benefits. Refer to Note 16, Retirement Benefits, for additional information.

Foreign and state loss carryforwards as of 30 September 2013 were \$154.9 and \$301.0, respectively. As of 30 September 2013, foreign tax credits and other tax carryforwards were \$46.9, and U.S. tax credits were \$19.7. Unused foreign loss carryforwards, tax credits, and other tax carryforwards of \$117.9 have expiration periods that range from 2014 to 2023; the remainder have unlimited carryforward periods. State loss carryforwards have expiration periods that range between fiscal years 2014 and 2033, and U.S. tax credits mainly expire in 2023.

The net change in the valuation allowance was an increase of \$8.1 for the year ended 30 September 2013. The valuation allowance as of 30 September 2013 primarily relates to the foreign and state loss carryforwards, tax credits, and other tax carryforwards referenced above. If events warrant the reversal of the \$44.7 valuation allowance, it would result in a reduction of tax expense. We believe it is more likely than not that future earnings will be sufficient to utilize our deferred tax asset, net of existing valuation allowance, at 30 September 2013.

We record U.S. income taxes on the undistributed earnings of our foreign subsidiaries and corporate joint ventures unless those earnings are permanently reinvested in the companies that produced them. These cumulative undistributed earnings that are considered to be permanently reinvested in foreign subsidiaries and corporate joint ventures are included in retained earnings on the consolidated balance sheets and amounted to \$5,524.9 as of 30 September 2013. An estimated \$1,400.3 in U.S. income and foreign withholding taxes would be due if these





**Table of Contents**

earnings were remitted as dividends after payment of all deferred taxes. As more than 90% of the undistributed earnings are in countries with a statutory tax rate of 24% or higher, we do not generate a disproportionate amount of taxable income in countries with very low tax rates.

A reconciliation of the beginning and ending amount of the unrecognized tax benefits is as follows:

<b>Unrecognized Tax Benefits</b>	<b>2013</b>	2012	2011
Balance at beginning of year	<b>\$110.8</b>	\$126.4	\$197.8
Additions for tax positions of the current year	<b>12.7</b>	44.5	16.3
Additions for tax positions of prior years	<b>9.0</b>	2.3	5.7
Reductions for tax positions of prior years	<b>(.5)</b>	(46.9)	(72.4)
Settlements	<b>(1.4)</b>	(11.0)	(15.6)
Statute of limitations expiration	<b>(8.0)</b>	(3.7)	(4.8)
Foreign currency translation	<b>1.7</b>	(.8)	(.6)
<b>Balance at End of Year</b>	<b>\$124.3</b>	\$110.8	\$126.4

At 30 September 2013 and 2012, we had \$124.3 and \$110.8 of unrecognized tax benefits, excluding interest and penalties, of which \$63.1 and \$56.9, respectively, would impact the effective tax rate if recognized.

Interest and penalties related to unrecognized tax benefits are recorded as a component of income tax expense and totaled \$2.4 in 2013, \$(26.1) in 2012, and \$(2.4) in 2011. Our accrued balance for interest and penalties was \$8.1 and \$7.2 in 2013 and 2012, respectively.

We were challenged by the Spanish tax authorities over income tax deductions taken by certain of our Spanish subsidiaries during fiscal years 2005-2011. In November 2011, we reached a settlement with the Spanish tax authorities for 41.3 million (\$56) in resolution of all tax issues under examination. This settlement increased our income tax expense for the fiscal year ended 30 September 2012 by \$43.8 (\$.20 per share) and had a 3.3% impact on our effective tax rate. As a result of this settlement, we recorded a reduction in unrecognized tax benefits of \$6.4 for tax positions taken in prior years and \$11.0 for settlements.

On 25 January 2012, the Spanish Supreme Court released its decision in favor of our Spanish subsidiary related to certain tax transactions for years 1991 and 1992, a period before we controlled this subsidiary. As a result, in the second quarter of 2012, we recorded a reduction in income tax expense of \$58.3 (\$.27 per share), resulting in a 4.4% reduction in our effective tax rate for the fiscal year ended 30 September 2012. As a result of this ruling, we recorded a reduction in unrecognized tax benefits of \$38.3 for tax positions taken in prior years.

During the third quarter of 2012, our unrecognized tax benefits increased \$33.3 as a result of certain tax positions taken in conjunction with the disposition of our Homecare business. When resolved, these benefits will be recognized in Income from discontinued operations, net of tax on our consolidated income statements and will not impact our effective tax rate. For additional information, see Note 3, Discontinued Operations.

In the third quarter of 2011, a U.S. Internal Revenue Service audit over tax years 2007 and 2008 was completed, resulting in a decrease in unrecognized tax benefits of \$36.0 and a favorable impact to earnings of \$23.9. This included a tax benefit of \$8.9 (\$.04 per share) recognized in income from discontinued operations for fiscal year 2011, as it relates to the previously divested U.S. Healthcare business.

We are also currently under examination in a number of tax jurisdictions, some of which may be resolved in the next twelve months. As a result, it is reasonably possible that a change in the unrecognized tax benefits may occur during the next twelve months. However, quantification of an estimated range cannot be made at this time.

**Table of Contents**

We generally remain subject to examination in the following major tax jurisdictions for the years indicated below:

<b>Major Tax Jurisdiction</b>	<b>Open Tax Years</b>
<b>North America</b>	
United States	2009 2013
Canada	2008 2013
<b>Europe</b>	
France	2009 2013
Germany	2006 2013
Netherlands	2008 2013
Poland	2008 2013
Spain	2009 2013
United Kingdom	2010 2013
<b>Asia</b>	
China	2008 2013
Singapore	2008 2013
South Korea	2008 2013
Taiwan	2009 2013
<b>Latin America</b>	
Brazil	2008 2013
Chile	2010 2013

**Table of Contents****23. SUPPLEMENTAL INFORMATION****Other Receivables and Current Assets**

<b>30 September</b>	<b>2013</b>	<b>2012</b>
Deferred tax assets	\$115.3	\$129.0
Derivative instruments	61.8	14.7
Other receivables	174.1	126.3
Current capital lease receivables	67.2	62.0
Other	14.0	10.0
	<b>\$432.4</b>	<b>\$342.0</b>

**Other Noncurrent Assets**

<b>30 September</b>	<b>2013</b>	<b>2012</b>
Derivative instruments	\$64.1	\$112.9
Other long-term receivables	38.2	47.8
Deferred financing cost, net	27.0	24.3
Prepaid tax	34.1	
Deferred tax assets	53.1	73.7
Pension benefits	20.5	0.9
Other	156.5	134.0
	<b>\$393.5</b>	<b>\$393.6</b>

**Payables and Accrued Liabilities**

<b>30 September</b>	<b>2013</b>	<b>2012</b>
Trade creditors	\$1,025.5	\$1,004.9
Customer advances	162.7	155.0
Accrued payroll and employee benefits	133.5	137.7
Pension benefits	14.7	13.5
Dividends payable	150.0	136.0
Outstanding payments in excess of certain cash balances	10.5	26.3
Accrued interest expense	54.1	48.4
Derivative instruments	27.5	34.8
Contingent proceeds related to Homecare retenders	148.1	
Liability related to purchase of shares from noncontrolling interests		10.6
Contract actions associated with business restructuring	1.9	100.0
Severance and other costs associated with business restructuring and cost reduction plans	65.2	89.4
Other	151.2	171.1
	<b>\$1,944.9</b>	<b>\$1,927.7</b>

**Other Noncurrent Liabilities**

<b>30 September</b>	<b>2013</b>	<b>2012</b>
Pension benefits	\$599.0	\$1,234.8
Postretirement benefits	89.0	107.3
Other employee benefits	114.3	123.0
Contingencies related to uncertain tax positions	94.2	112.1
Advance payments	31.0	32.7
Environmental liabilities	79.6	80.3
Contingent proceeds related to Homecare retenders		140.8
Derivative instruments	13.8	12.0
Asset retirement obligations	86.0	71.2
Other	57.4	66.7
	<b>\$1,164.3</b>	<b>\$1,980.9</b>

**Table of Contents****Accumulated Other Comprehensive Income (Loss)**

<b>30 September</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
Net unrecognized loss on derivatives qualifying as hedges	<b>\$(4.1)</b>	\$(18.9)	\$(9.5)
Foreign currency translation adjustments	<b>(61.5)</b>	(38.8)	(130.9)
Pension and postretirement benefits	<b>(955.0)</b>	(1,291.1)	(1,113.0)
	<b>\$(1,020.6)</b>	\$(1,348.8)	\$(1,253.4)

**Other Income (Expense), Net**

<b>30 September</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
Technology and royalty income	<b>\$23.4</b>	\$22.9	\$24.3
Interest income	<b>6.4</b>	5.4	5.7
Foreign exchange	<b>(3.2)</b>	1.1	(8.6)
Sale of assets and investments	<b>20.0</b>	8.4	14.6
Government grants	<b>6.8</b>	15.2	9.5
Other	<b>16.8</b>	(5.9)	(3.8)
	<b>\$70.2</b>	\$47.1	\$41.7

**Advisory Costs**

During the fourth quarter of 2013, we incurred legal and other advisory fees of \$10.1 (\$6.4 after-tax, or \$.03 per share) in connection with our response to the rapid acquisition of a large position in shares of our common stock by Pershing Square Capital Management LLC and its affiliates (Pershing Square). These fees, which are reflected on the consolidated income statements as Advisory Costs, include costs incurred before and after Pershing Square's disclosure of its holdings and cover advisory services related to the adoption of the Shareholders Rights Plan, preparation for a potential proxy solicitation campaign, and entering into an agreement with Pershing Square.

**Customer Bankruptcy**

As a result of events which occurred during the fourth quarter of 2012, we recognized a charge of \$9.8 (\$6.1 after-tax, or \$.03 per share) primarily related to the write-off of on-site assets due to a customer bankruptcy and mill shutdown. The customer, which primarily received products from the Tonnage Gases segment, filed for bankruptcy in May 2012. Sales and operating income associated with this customer are not material to the Tonnage Gases segment's results. We do not expect to recognize additional charges related to this customer.

**Table of Contents****24. SUMMARY BY QUARTER (UNAUDITED)**

These tables summarize the unaudited results of operations for each quarter of 2013 and 2012:

<b>2013</b>	First	Second	Third	Fourth	Total
Sales	\$2,562.4	\$2,484.2	\$2,547.3	\$2,586.5	\$10,180.4
Gross profit	662.3	670.6	671.8	703.6	2,708.3
Business restructuring and cost reduction plans <sup>(A)</sup>				231.6	231.6
Pension settlement loss <sup>(B)</sup>			4.5	7.9	12.4
Advisory costs <sup>(C)</sup>				10.1	10.1
Operating income	372.4	389.7	383.1	179.2	1,324.4
Net income	287.2	299.6	298.4	147.3	1,032.5
Net Income attributable to Air Products					
Income from continuing operations	276.9	289.3	287.8	150.2	1,004.2
Income (Loss) from discontinued operations	1.4	1.1	.6	(13.1)	(10.0)
Net Income attributable to Air Products	278.3	290.4	288.4	137.1	994.2
Basic EPS attributable to Air Products					
Income from continuing operations	1.32	1.38	1.38	.71	4.79
Income (Loss) from discontinued operations	.01	.01		(.06)	(.05)
Net income per common share	1.33	1.39	1.38	.65	4.74
Diluted EPS attributable to Air Products					
Income from continuing operations	1.30	1.37	1.36	.70	4.73
Income (Loss) from discontinued operations	.01	.01		(.06)	(.05)
Net income per common share	1.31	1.38	1.36	.64	4.68
Dividends declared per common share	.64	.71	.71	.71	2.77
Market price per common share:					
High	86.31	90.34	97.12	114.75	
Low	76.78	84.15	84.04	90.12	
<b>2012</b>	First	Second	Third	Fourth	Total
Sales	\$2,321.5	\$2,344.3	\$2,340.1	\$2,605.8	\$9,611.7
Gross profit	599.2	628.5	649.3	682.8	2,559.8
Business restructuring and cost reduction plans <sup>(A)</sup>		86.8		240.6	327.4
Gain on previously held equity interest <sup>(D)</sup>			85.9		85.9
Customer bankruptcy <sup>(C)</sup>				9.8	9.8
Operating income	353.8	287.9	482.8	157.9	1,282.4
Net income	256.3	302.2	492.5	142.3	1,193.3
Net Income attributable to Air Products					
Income from continuing operations	225.9	279.0	357.2	137.1	999.2
Income from discontinued operations	22.2	17.0	127.3	1.6	168.1
Net Income attributable to Air Products	248.1	296.0	484.5	138.7	1,167.3
Basic EPS attributable to Air Products					
Income from continuing operations	1.07	1.32	1.69	.65	4.73
Income from discontinued operations	.11	.08	.60	.01	.80
Net income per common share	1.18	1.40	2.29	.66	5.53
Diluted EPS attributable to Air Products					
Income from continuing operations	1.06	1.30	1.66	.64	4.66
Income from discontinued operations	.10	.08	.60	.01	.78
Net income per common share	1.16	1.38	2.26	.65	5.44
Dividends declared per common share	.58	.64	.64	.64	2.50
Market price per common share:					
	90.20	92.48	92.79	85.83	

High

Low

72.26

85.60

76.11

77.21

## **Table of Contents**

- (A) For additional information, see Note 4, Business Restructuring and Cost Reduction Plans.
- (B) For additional information, see Note 16, Retirement Benefits. During the third quarter, the pension settlements loss of \$4.5 was presented in other income (expense), net.
- (C) For additional information, see Note 23, Supplemental Information.
- (D) For additional information, see Note 5, Business Combinations.

## **25. BUSINESS SEGMENT AND GEOGRAPHIC INFORMATION**

Our segments are organized based on differences in product and/or type of customer. We have four business segments consisting of Merchant Gases, Tonnage Gases, Electronics and Performance Materials, and Equipment and Energy.

### **Merchant Gases**

The Merchant Gases segment sells atmospheric gases such as oxygen, nitrogen, and argon (primarily recovered by the cryogenic distillation of air); process gases such as hydrogen and helium (purchased or refined from crude helium); and medical and specialty gases, along with certain services and equipment, throughout the world to customers in many industries, including those in metals, glass, chemical processing, food processing, healthcare, general manufacturing, and petroleum and natural gas industries. The principal types of products are liquid bulk, packaged gases and hardgoods, and small on-site plants. Most merchant product is delivered via bulk supply, in liquid or gaseous form, by tanker or tube trailer. Smaller quantities of industrial and specialty gases are delivered in cylinders and dewars as packaged gases, or through small on-sites (cryogenic or noncryogenic generators). Electricity is the largest cost component in the production of atmospheric gases. Natural gas is also an energy source at a number of our Merchant Gases facilities. We mitigate energy and natural gas prices through pricing formulas and surcharges. The Merchant Gases segment also includes our share of the results of several joint ventures accounted for by the equity method. The largest of these joint ventures operate in Mexico, Italy, South Africa, India, Saudi Arabia, and Thailand. Merchant Gases competes worldwide against global industrial gas companies and several regional sellers. Competition in industrial gases is based primarily on price, reliability of supply, and the development of industrial gas applications.

### **Tonnage Gases**

Tonnage Gases provides hydrogen, carbon monoxide, nitrogen, oxygen, and syngas principally to the energy production and refining, chemical, and metallurgical industries worldwide. For large-volume, or tonnage industrial gas users, we either construct a gas plant adjacent to or near the customer's facility hence the term on-site or deliver product through a pipeline from a nearby location. We are the world's largest provider of hydrogen, which is used by refiners to lower the sulfur content of gasoline and diesel fuels to reduce smog and ozone depletion. Electricity is the largest cost component in the production of atmospheric gases, and natural gas is the principal raw material for hydrogen, carbon monoxide, and syngas production. We mitigate energy and natural gas price changes through long-term cost pass-through type contracts. Tonnage Gases competes against global industrial gas companies, as well as regional competitors. Competition is based primarily on price, reliability of supply, the development of applications that use industrial gases and, in some cases, provision of other services or products such as power and steam generation. We also derive a competitive advantage in regions where we have pipeline networks, which enable us to provide reliable and economic supply of products to customers.

### **Electronics and Performance Materials**

The Electronics and Performance Materials segment employs applications technology to provide solutions to a broad range of global industries through expertise in chemical synthesis, analytical technology, process engineering, and surface science. This segment provides specialty and tonnage gases, specialty chemicals, services, and equipment to the electronics industry primarily for the manufacture of silicon and compound semiconductors as well as liquid crystal (LCD) and other displays. The segment also provides performance chemical solutions for the coatings, inks, adhesives, civil engineering, personal care, institutional and industrial cleaning, mining, oil field, polyurethane, and other industries. The Electronics and Performance Materials segment faces competition on a product-by-product basis against competitors ranging from niche suppliers with a single product to large, vertically integrated companies. Competition is principally conducted on the basis of price, quality, product performance, reliability of product supply, technical innovation, service, and global infrastructure.

### **Equipment and Energy**

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

The Equipment and Energy segment designs and manufactures cryogenic and gas processing equipment for air separation, hydrocarbon recovery and purification, natural gas liquefaction (LNG), and helium distribution, and serves energy markets in a variety of ways. Equipment is sold worldwide to customers in a variety of industries,



**Table of Contents**

including chemical and petrochemical manufacturing, oil and gas recovery and processing, and steel and primary metals processing. Energy markets are served through our operation and partial ownership of cogeneration and flue gas desulfurization facilities. In addition, we are developing hydrogen as an energy carrier, waste-to-energy facilities to produce electricity, carbon capture technologies for a variety of industrial and power applications, and oxygen-based technologies to serve energy markets in the future. Equipment and Energy competes with a large number of firms for all of its offerings except LNG heat exchangers, for which there are fewer competitors due to the limited market size and proprietary technologies. Competition is based primarily on technological performance, service, technical know-how, price, and performance guarantees.

**Other**

Other operating income (loss) includes other expense and income that cannot be directly associated with the business segments, including foreign exchange gains and losses and costs previously allocated to businesses now reported as discontinued operations. Also included are LIFO inventory adjustments, as the business segments use FIFO and the LIFO pool adjustments are not allocated to the business segments.

Other assets include cash, deferred tax assets, pension assets, financial instruments, and corporate assets previously allocated to businesses now reported as discontinued operations.

**Customers**

We do not have a homogeneous customer base or end market, and no single customer accounts for more than 10% of our consolidated revenues.

**Accounting Policies**

The accounting policies of the segments are the same as those described in Note 1, Major Accounting Policies. We evaluate the performance of segments based upon reported segment operating income. Operating income of the business segments includes general corporate expenses. Intersegment sales are not material and are recorded at selling prices that approximate market prices. Equipment manufactured for our industrial gas business is generally transferred at cost and not reflected as an intersegment sale.

**Business Segment**

<b>Sales to External Customers</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
Merchant Gases	\$4,098.6	\$3,662.4	\$3,664.9
Tonnage Gases	3,387.3	3,206.7	3,316.7
Electronics and Performance Materials	2,243.4	2,322.5	2,291.5
Equipment and Energy	451.1	420.1	400.6
<b>Segment and Consolidated Totals</b>	<b>\$10,180.4</b>	<b>\$9,611.7</b>	<b>\$9,673.7</b>
<b>Operating Income</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
Merchant Gases	\$680.5	\$644.0	\$668.9
Tonnage Gases	515.9	512.0	503.1
Electronics and Performance Materials <sup>(A)</sup>	321.3	425.6	361.1
Equipment and Energy	65.5	44.6	62.8
Segment total	\$1,583.2	\$1,626.2	\$1,595.9
Business restructuring and cost reduction plans <sup>(B)</sup>	(231.6)	(327.4)	
Net loss on Airgas transaction			(48.5)
Customer bankruptcy		(9.8)	
Pension settlement loss	(12.4)		
Advisory costs	(10.1)		
Other <sup>(C)</sup>	(4.7)	(6.6)	(39.3)
<b>Consolidated Total</b>	<b>\$1,324.4</b>	<b>\$1,282.4</b>	<b>\$1,508.1</b>

(A)

## Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Includes the gain on remeasuring our previously held equity interest in DA NanoMaterials. For additional information, see Note 5, Business Combinations.

- (B) Information about how the charges related to the businesses at the segment level is discussed in Note 4, Business Restructuring and Cost Reduction Plans.
- (C) Includes stranded costs resulting from discontinued operations.

**Table of Contents****Business Segment**

<b>Depreciation and Amortization</b>	<b>2013</b>	2012	2011
Merchant Gases	\$409.5	\$363.2	\$356.9
Tonnage Gases	314.8	320.4	310.9
Electronics and Performance Materials	173.4	144.1	154.9
Equipment and Energy	8.3	12.2	11.0
Segment total	\$906.0	\$839.9	\$833.7
Other	1.0	.9	.6
<b>Consolidated Total</b>	<b>\$907.0</b>	\$840.8	\$834.3
<b>Equity Affiliates Income</b>	<b>2013</b>	2012	2011
Merchant Gases	\$145.0	\$137.1	\$134.6
Other segments	22.8	16.7	19.7
<b>Segment and Consolidated Totals</b>	<b>\$167.8</b>	\$153.8	\$154.3
<b>Total Assets</b>	<b>2013</b>	2012	2011
Merchant Gases	\$7,742.2	\$7,411.9	\$5,380.0
Tonnage Gases	5,528.2	5,192.2	4,581.8
Electronics and Performance Materials	2,891.5	2,969.6	2,560.7
Equipment and Energy	695.1	399.9	357.5
Segment total	\$16,857.0	\$15,973.6	\$12,880.0
Other	990.6	925.4	878.6
Discontinued Operations	2.5	42.8	532.1
<b>Consolidated Total</b>	<b>\$17,850.1</b>	\$16,941.8	\$14,290.7
<b>Investment in Net Assets of and Advances to Equity Affiliates</b>	<b>2013</b>	2012	2011
Merchant Gases	\$1,012.3	\$983.4	\$800.4
Other segments	183.2	192.3	211.2
<b>Segment and Consolidated Totals</b>	<b>\$1,195.5</b>	\$1,175.7	\$1,011.6
<b>Identifiable Assets</b>	<b>2013</b>	2012	2011
Merchant Gases	\$6,729.9	\$6,428.5	\$4,579.6
Tonnage Gases	5,397.0	5,059.8	4,464.3
Electronics and Performance Materials	2,859.4	2,930.3	2,488.9
Equipment and Energy	675.2	379.3	335.6
Segment total	\$15,661.5	\$14,797.9	\$11,868.4
Other	990.6	925.4	878.6
Discontinued Operations	2.5	42.8	532.1
<b>Consolidated Total</b>	<b>\$16,654.6</b>	\$15,766.1	\$13,279.1
<b>Expenditures for Long-Lived Assets <sup>(A)</sup></b>	<b>2013</b>	2012	2011
Merchant Gases	\$558.7	\$523.6	\$390.5
Tonnage Gases	448.0	630.7	669.9
Electronics and Performance Materials	226.8	280.8	196.0
Equipment and Energy	290.7	85.9	45.9
Segment total	\$1,524.2	\$1,521.0	\$1,302.3
Other			7.0
<b>Consolidated Total</b>	<b>\$1,524.2</b>	\$1,521.0	\$1,309.3

(A) Includes plant and equipment.

**Table of Contents****Geographic Information**

<b>Sales to External Customers</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
United States	\$4,258.4	\$4,114.5	\$4,252.5
Canada	275.5	267.6	297.0
Europe	2,602.1	2,588.5	2,773.8
Asia, excluding China	1,320.1	1,349.9	1,307.9
China	1,008.3	954.1	814.2
Latin America	716.0	337.1	228.3
	<b>\$10,180.4</b>	<b>\$9,611.7</b>	<b>\$9,673.7</b>
<b>Long-Lived Assets</b> <sup>(A)</sup>	<b>2013</b>	<b>2012</b>	<b>2011</b>
United States	\$3,632.1	\$3,534.4	\$3,099.2
Canada	522.3	571.3	566.1
Europe	2,068.8	1,760.1	1,650.0
Asia, excluding China	962.3	948.1	954.2
China	1,281.7	918.5	832.0
Latin America	506.8	508.2	121.2
	<b>\$8,974.0</b>	<b>\$8,240.6</b>	<b>\$7,222.7</b>

(A) Long-lived assets include plant and equipment, net.

Geographic information is based on country of origin. Included in United States revenues are export sales to third-party customers of \$410.3 in 2013, \$521.1 in 2012, and \$537.3 in 2011. The Europe region operates principally in France, Germany, the Netherlands, Poland, Spain, and the U.K. The Asia region operates principally in China, Singapore, South Korea, and Taiwan. The Latin America region operates principally in Brazil and Chile.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

Not applicable

**ITEM 9A. CONTROLS AND PROCEDURES**

Under the supervision of the Chief Executive Officer and Chief Financial Officer, the Company's management conducted an evaluation of the effectiveness of the Company's disclosure controls and procedures as of 30 September 2013. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the annual period covered by this report, the disclosure controls and procedures have been effective. There has been no change in the Company's internal control over financial reporting (as that term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) as of 30 September 2013 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting is provided under Item 8 appearing above. The report of KPMG LLP, the Company's independent registered public accounting firm, regarding the Company's internal control over financial reporting, is also provided under Item 8 appearing above.

**ITEM 9B. OTHER INFORMATION**

Not applicable



**Table of Contents**

**PART III**

**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

The biographical information relating to the Company's directors, appearing in the Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014, under the section "The Board of Directors," is incorporated herein by reference. Biographical information relating to the Company's executive officers is set forth in Item 1 of Part I of this Report.

Information on Section 16(a), Beneficial Ownership Reporting Compliance, appearing in the Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014, under the section "Air Products Stock Beneficially Owned by Officers and Directors," is incorporated herein by reference.

We have adopted a Code of Conduct that applies to all employees, including the Chief Executive Officer, the Chief Financial Officer, and the Controller. The Code of Conduct can be found at our Internet website at [www.airproducts.com/codeofconduct](http://www.airproducts.com/codeofconduct).

Information on our procedures regarding our consideration of candidates recommended by shareholders and a procedure for submission of such candidates, appearing in the Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014, under the section "Selection of Directors," is incorporated by reference. Information on the Company's Audit Committee and its Audit Committee Financial Expert, appearing in Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014, under the section "Audit Committee," is incorporated by reference.

**ITEM 11. EXECUTIVE COMPENSATION**

The information under "Compensation of Executive Officers," which includes "Report of the Management Development and Compensation Committee," "Compensation Discussion and Analysis," "Executive Compensation Tables," "Potential Payments Upon Termination or Change in Control," and "Information About Stock Ownership," appearing in the Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014, is incorporated herein by reference.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

**Securities Authorized for Issuance Under Equity Compensation Plans.**

**Equity Compensation Plan Information**

The following table provides information as of 30 September 2013 about Company stock that may be issued upon the exercise of options, warrants, and rights granted to employees or members of the Board under the Company's existing equity compensation plans, including plans approved by shareholders and plans that have not been approved by shareholders in reliance on the NYSE's former treasury stock exception or other applicable exception to the Exchange's listing requirements.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants, and rights	Weighted-average exercise price of outstanding options, warrants, and rights	Number of Securities remaining available for future issuance under equity compensation plans (excluding securities reflected in
---------------	---	--	--

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

			<b>column (a)</b>
Equity compensation plans approved by security holders	9,870,170 <sup>(1)</sup>	\$75.69	6,643,608 <sup>(2)</sup>
Equity compensation plans not approved by security holders	94,026 <sup>(3)</sup>	\$	
<b>Total</b>	<b>9,964,196</b>	<b>\$75.69</b>	<b>6,643,608</b>

<sup>(1)</sup> Represents Long-Term Incentive Plan outstanding stock options and deferred stock units that have been granted. Deferred stock units entitle the recipient to one share of Company common stock upon vesting, which is conditioned on continued employment during a deferral period and may also be conditioned on earn-out against certain performance targets.

**Table of Contents**

(2) Represents authorized shares that were available for future grants as of 30 September 2013. These shares may be used for options, deferred stock units, restricted stock, and other stock-based awards to officers, directors, and key employees. Full value awards such as restricted stock are limited to 20% of cumulative awards after 1 October 2001.

(3) This number represents deferred stock units issued under the Deferred Compensation Plan, which are purchased for the fair market value of the underlying shares of stock with eligible deferred compensation.

The following equity compensation plans or programs were not approved by shareholders. All of these plans have either been discontinued or do not require shareholder approval because participants forego current compensation equal to the full market value of any share units credited under the plans.

*Deferred Compensation Plan* The Company's Deferred Compensation Plan is an unfunded employee retirement benefit plan available to certain of the Company's U.S.-based management and other highly compensated employees (and those of its subsidiaries) who receive awards under the Company's Annual Incentive Plan, which is the annual cash bonus plan for executives and key salaried employees of the Company and its subsidiaries. Because participants forego current compensation to purchase deferred stock units for full value under the Plan, it is not required to be approved by shareholders under the NYSE listing standards. Under the Plan, participants may defer a portion of base salary (elective deferrals) which cannot be contributed to the Company's Retirement Savings Plan, a 401(k) and profit-sharing plan offered to all salaried employees (RSP), because of tax limitations and earn matching contributions from the Company that they would have received if their elective deferrals had been contributed to the RSP (matching credits). In addition, participants in the Plan may defer all or a portion of their bonus awards under the Annual Incentive Plan (bonus deferrals) under the Deferred Compensation Plan. Finally, certain participants under the Plan who participate in the profit-sharing component of the RSP rather than the Company's salaried pension plans receive contribution credits under the Plan which are a percentage ranging from 4%-6%, based on their years of service, of their salary in excess of tax limitations and their bonus awards under the Annual Incentive Plan (contribution credits). The dollar amount of elective deferrals, matching credits, bonus deferrals, and contribution credits is initially credited to an unfunded account, which earns interest credits. Participants are periodically permitted while employed by the Company to irrevocably convert all or a portion of their interest-bearing account to deferred stock units in a Company stock account. Upon conversion, the Company stock account is credited with deferred stock units based on the fair market value of a share of Company stock on the date of crediting. Dividend equivalents corresponding to the number of units are credited quarterly to the interest-bearing account. Deferred stock units generally are paid after termination of employment in shares of Company stock.

The Deferred Compensation Plan was formerly known as the Supplementary Savings Plan. The name was changed in 2006 when the deferred bonus program, previously administered under the Annual Incentive Plan, was merged into this Plan.

The information set forth in the sections headed "Persons Owning More than 5% of Air Products Stock as of September 30, 2013," and "Air Products Stock Beneficially Owned by Officers and Directors," appearing in the Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014, is incorporated herein by reference.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information appearing in the Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014 under the sections "Director Independence" and "Transactions with Related Persons" is incorporated by reference.

**ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information appearing in the Proxy Statement for the Annual Meeting of Shareholders to be held on 23 January 2014 under the section "Fees of Independent Registered Public Accountant," is incorporated herein by reference.



**Table of Contents**

**PART IV**

**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

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

(1) The Company's 2013 consolidated financial statements and the Report of the Independent Registered Public Accounting Firm are included in Part II, Item 8.

(2) Financial Statement Schedules the following additional information should be read in conjunction with the consolidated financial statements in the Company's 2013 consolidated financial statements.

Schedule II Valuation and Qualifying Accounts for the three fiscal years ended 30 September 2013

105

All other schedules are omitted because the required matter or conditions are not present or because the information required by the Schedules is submitted as part of the consolidated financial statements and notes thereto.

(3) Exhibits The exhibits filed as a part of this Annual Report on Form 10-K are listed in the Index to Exhibits located on page 106 of this Report.

**Table of Contents**

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

AIR PRODUCTS AND CHEMICALS, INC.

(Registrant)

By: /s/ M. Scott Crocco  
M. Scott Crocco

Senior Vice President and Chief Financial Officer

(Principal Financial Officer)

Date: 26 November 2013

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

**Signature and Title**

**Date**

/s/ John E. McGlade  
(John E. McGlade)

26 November 2013

Director, Chairman, President, and

Chief Executive Officer

(Principal Executive Officer)

/s/ M. Scott Crocco  
(M. Scott Crocco)

26 November 2013

Senior Vice President and Chief Financial Officer

(Principal Accounting Officer)

\*  
(Susan K. Carter)

26 November 2013

Director

\*  
(William L. Davis, III)

26 November 2013

Director

\*  
(Chad C. Deaton)

26 November 2013

Edgar Filing: AIR PRODUCTS & CHEMICALS INC /DE/ - Form 10-K

Director

\*

(Michael J. Donahue)

26 November 2013

Director

\*

(Ursula O. Fairbairn)

26 November 2013

Director

\*

(W. Douglas Ford)

26 November 2013

Director

**Table of Contents**

* (Seifi Ghasemi)	26 November 2013
Director	
* (Evert Henkes)	26 November 2013
Director	
* (David H. Y. Ho)	26 November 2013
Director	
* (Margaret G. McGlynn)	26 November 2013
Director	
* (Matthew H. Paull)	26 November 2013
Director	
* (Lawrence S. Smith)	26 November 2013
Director	

\* Mary T. Afflerbach, Corporate Secretary and Chief Governance Officer, by signing her name hereto, does sign this document on behalf of the above noted individuals, pursuant to a power of attorney duly executed by such individuals, which is filed with the Securities and Exchange Commission herewith.

/s/ Mary T. Afflerbach  
Mary T. Afflerbach  
Attorney-in-Fact

Date: 26 November 2013

**Table of Contents**

SCHEDULE II  
CONSOLIDATED

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES

**SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS**

For the Years Ended 30 September 2013, 2012, and 2011

	Balance at Beginning of Period	Additions Charged to Expense	Charged to Cumulative Other Accounts Adjustment	Other Changes Increase (Decrease) Other <sup>(A)</sup>	Balance at End of Period	
	(in millions of dollars)					
<b>Year Ended 30 September 2013</b>						
Allowance for doubtful accounts	\$104	\$9	\$19	\$1	\$(31)	\$102
Allowance for deferred tax assets	37	8				45
<b>Year Ended 30 September 2012</b>						
Allowance for doubtful accounts	\$78	\$21	\$16	\$1	\$(12)	\$104
Allowance for deferred tax assets	28	9				37
<b>Year Ended 30 September 2011</b>						
Allowance for doubtful accounts	\$79	\$16	\$7	\$(1)	\$(23)	\$78
Allowance for deferred tax assets	55	(27)				28

<sup>(A)</sup> Primarily write-offs of uncollectible trade receivable accounts.

**Table of Contents**

**INDEX TO EXHIBITS**

<b>Exhibit No.</b>	<b>Description</b>
(3)	Articles of Incorporation and By-Laws.
3.1	Amended and Restated By-Laws of the Company. (Filed as Exhibit 3 to the Company's Form 8-K Report dated 23 July 2013.)*
3.2	Restated Certificate of Incorporation of the Company. (Filed as Exhibit 3.2 to the Company's Form 10-K Report for the fiscal year ended 30 September 1987.)*
3.3	Amendment to the Restated Certificate of Incorporation of the Company dated 25 January 1996. (Filed as Exhibit 3.3 to the Company's Form 10-K Report for the fiscal year ended 30 September 1996.)*
(4)	Instruments defining the rights of security holders, including indentures. Upon request of the Securities and Exchange Commission, the Company hereby undertakes to furnish copies of the instruments with respect to its long-term debt.
4.1	Rights Agreement, dated as of 24 July 2013, between the Company and American Stock Transfer and Trust Company (Filed as Exhibit 4.1 to the Company's Form 8-K Report dated 25 July 2013.)*
4.2	Indenture, dated as of January 18, 1985, between the Company and The Chase Manhattan Bank (National Association), as Trustee. (Filed as Exhibit 4(a) to the Company's Registration Statement No. 33-36974.)*
4.3	Indenture, dated as of January 10, 1995, between the Company and The Bank of New York Trust Company, N.A. (formerly Wachovia Bank, National Association and initially First Fidelity Bank Company, National Association), as Trustee. (Filed as Exhibit 4(a) to the Company's Registration Statement No. 33-57357.)*
(10)	Material Contracts
10.1	1990 Deferred Stock Plan of the Company, as amended and restated effective 1 October 1989. (Filed as Exhibit 10.1 to the Company's Form 10-K Report for the fiscal year ended 30 September 1989.)*
10.2	Stock Option Program for Directors of the Company, formerly known as the Stock Option Plan for Directors. Effective 23 January 2003, this Plan was combined with the Long-Term Incentive Plan and offered as a program thereunder. (Filed as Exhibit 10.5 to the Company's Form 10-K Report for the fiscal year ended 30 September 2004.)*
10.3	Amended and Restated Trust Agreement by and between the Company and PNC Bank, N.A. relating to the Defined Benefit Pension Plans dated as of 1 August 1999. (Filed as Exhibit 10.13 to the Company's Form 10-K Report for the fiscal year ended 30 September 1999.)*
10.3(a)	Amendment No. 1 to the Amended and Restated Trust Agreement by and between the Company and PNC Bank, N.A. relating to the Defined Benefit Pension Plans, adopted 1 January 2000. (Filed as Exhibit 10.13(a) to the Company's Form 10-K Report for the fiscal year ended 30 September 2000.)*
10.3(b)	Amendment No. 2 to the Amended and Restated Trust Agreement by and between the Company and PNC Bank, N.A. relating to the Defined Benefit Pension Plans, adopted 11 April 2007. (Filed as Exhibit 10.7(b) to the Company's Form 10-K Report for the fiscal year ended 30 September 2007.)*
10.4	Amended and Restated Trust Agreement by and between the Company and PNC Bank, N.A. relating to the Supplementary Savings Plan dated as of 1 August 1999. (Filed as Exhibit 10.14 to the Company's Form 10-K Report for the fiscal year ended 30 September 1999.)*
10.4(a)	Amendment No. 1 to the Amended and Restated Trust Agreement by and between the Company and PNC Bank, N.A. relating to the Supplementary Savings Plan, adopted 1 January 2000. (Filed as Exhibit 10.14(a) to the Company's Form 10-K Report for the fiscal year ended 30 September 2000.)*

---

**Table of Contents**

- 10.4(b) Amendment No. 2 to the Amended and Restated Trust Agreement by and between the Company and PNC Bank, N.A. relating to the Defined Contribution Plans, adopted 11 April 2007. (Filed as Exhibit 10.8(b) to the Company's Form 10-K Report for the fiscal year ended 30 September 2007.)\*
- 10.5 Annual Incentive Plan as Amended and Restated Effective 1 October 2008. (Filed as Exhibit 10.7 to the Company's Form 10-Q Report for the quarter ended 31 March 2009.)\*
- 10.6 Stock Incentive Program of the Company effective 1 October 1996. (Filed as Exhibit 10.21 to the Company's Form 10-K Report for the fiscal year ended 30 September 2002.)\*
- 10.7 Amended and Restated Deferred Compensation Program for Directors, effective 1 October 2005. (Filed as Exhibit 10.26 to the Company's Form 10-K Report for the fiscal year ended 30 September 2005.)\*
- 10.8 Amended and Restated Long-Term Incentive Plan of the Company effective 24 January 2013. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 March 2013.)\*
- 10.8(a) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for the FY 2004 awards. (Filed as Exhibit 10.2 to the Company's Form 10-Q Report for the quarter ended 31 December 2003.)\*
- 10.8(b) Form of Award Agreement under the Long-Term Incentive Plan of the Company used for the FY 2005 awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 December 2004.)\*
- 10.8(c) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for FY 2006 awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 December 2005.)\*
- 10.8(d) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for FY 2007 awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 December 2006.)\*
- 10.8(e) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for FY 2008 awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 December 2007.)\*
- 10.8(f) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for FY 2009 Awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 December 2008.)\*
- 10.8(g) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for FY2010 awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 December 2009.)\*
- 10.8(h) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for FY2011 awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 December 2010.)\*
- 10.8(i) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for FY2012 awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 March 2012.)\*
- 10.8(j) Form of Award Agreement under the Long-Term Incentive Plan of the Company, used for FY2013 awards. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 December 2013.)\*
- 10.9 Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective October 1, 2009 including amendments through September 30, 2010. (Filed as Exhibit 10.14 to the Company's Form 10-K Report for the fiscal year ended 30 September 2010.)\*

**Table of Contents**

- 10.9(a) Amendment No. 1 to the Air Products and Chemicals, Inc. Retirement Savings Plan. (Filed as Exhibit 10.9(a) to the Company's Form 10-K Report for the fiscal year ended 30 September 2011.)\*
- 10.9(b) Amendment No. 2 to the Air Products and Chemicals, Inc. Retirement Savings Plan. (Filed as Exhibit 10.9(b) to the Company's Form 10-K Report for the fiscal year ended 30 September 2011.)\*
- 10.9(c) Amendment No. 3 to the Air Products and Chemicals, Inc. Retirement Savings Plan. (Filed as Exhibit 10.2 to the Company's Form 10-Q Report for the quarter ended 31 March 2012.)\*
- 10.9(d) Amendment No. 4 to the Air Products and Chemicals, Inc. Retirement Savings Plan. (Filed as Exhibit 10.3 to the Company's Form 10-Q Report for the quarter ended 31 March 2012.)\*
- 10.9(e) Amendment No. 5 to the Air Products and Chemicals, Inc. Retirement Savings Plan (Filed as Exhibit 10.9(e) to the Company's Form 10-K Report for the fiscal year ended 30 September 2012.)\*.
- 10.9(f) Amendment No. 6 to the Air Products and Chemicals, Inc. Retirement Savings Plan (Filed as Exhibit 10.2 to the Company's Form 10-Q Report for the quarter ended 30 June 2013.)\*.
- 10.9(g) Amendment No. 7 to the Air Products and Chemicals, Inc. Retirement Savings Plan (Filed as Exhibit 10.3 to the Company's Form 10-Q Report for the quarter ended 30 June 2013.)\*.
- 10.9(h) Amendment No. 8 to the Air Products and Chemicals, Inc. Retirement Savings Plan (Filed as Exhibit 10.4 to the Company's Form 10-Q Report for the quarter ended 30 June 2013.)\*.
- 10.10 Supplementary Pension Plan of Air Products and Chemicals, Inc. as Amended and Restated Effective January 1, 2008. (Filed as Exhibit 10.2 to the Company's Form 10-Q Report for the quarter ended 31 March 2009.)\*
- 10.10(a) Amendment No. 1 to the Supplementary Pension Plan of Air Products and Chemicals, Inc., as Amended and Restated Effective January 1, 2008. (Filed as Exhibit 10.3 to the Company's Form 10-Q Report for the quarter ended 31 March 2009.)\*
- 10.10(b) Amendment No. 2 to the Supplementary Pension Plan of Air Products and Chemicals, Inc., as Amended and Restated Effective January 1, 2008. (Filed as Exhibit 10.4 to the Company's Form 10-Q Report for the quarter ended 31 March 2009.)\*
- 10.10(c) Amendment No. 3 to the Supplementary Pension Plan of Air Products and Chemicals, Inc., as Amended and Restated Effective January 1, 2008. (Filed as Exhibit 10.5 to the Company's Form 10-Q Report for the quarter ended 31 March 2009.)\*
- 10.10(d) Amendment No. 4 to the Supplementary Pension Plan of Air Products and Chemicals, Inc., as Amended and Restated Effective January 1, 2008. . (Filed as Exhibit 10.10(d) to the Company's Form 10-K Report for the fiscal year ended 30 September 2012.)\*
- 10.11 Deferred Compensation Plan as Amended and Restated effective January 1, 2009. (Filed as Exhibit 10.19 to the Company's Form 10-K Report for the fiscal year ended 30 September 2009.)\*
- 10.11(a) Amendment No. 1 to the Deferred Compensation Plan as Amended and Restated effective January 1, 2009. (Filed as Exhibit 10.11(a) to the Company's Form 10-K Report for the fiscal year ended 30 September 2012.)\*
- 10.12 Amended and Restated Commitment Letter dated March 3, 2010 among Air Products and Chemicals, Inc., JPMorgan Chase Bank, N.A. and J.P. Morgan Securities Inc. (Filed as Exhibit 10.1 to Form 8-K filed on 5 March 2010 and incorporated herein by reference.)\*
- 10.13 Accession Letter dated March 3, 2010 among Air Products and Chemicals, Inc., The Royal Bank of Scotland plc and RBS Securities Inc. (Filed as Exhibit 10.2 to Form 8-K filed on 5 March 2010 and incorporated herein by reference.)\*



**Table of Contents**

10.14	Accession Letter dated March 3, 2010 among Air Products and Chemicals, Inc., Deutsche Bank AG Cayman Island Branch and Deutsche Bank Securities Inc. (Filed as Exhibit 10.3 to Form 8-K filed on 5 March 2010 and incorporated herein by reference.)*
10.15	Accession Letter dated March 3, 2010 among Air Products and Chemicals, Inc., BNP Paribas and BNP Paribas Securities Corp. (Filed as Exhibit 10.4 to Form 8-K filed on 5 March 2010 and incorporated herein by reference.)*
10.16	Accession Letter dated March 3, 2010 among Air Products and Chemicals, Inc., HSBC Securities (USA) Inc. and HSBC Bank USA, N.A. (Filed as Exhibit 10.5 to Form 8-K filed on 5 March 2010 and incorporated herein by reference.)*
10.17	Accession Letter dated March 3, 2010 between Air Products and Chemicals, Inc. and The Bank of Tokyo-Mitsubishi UFJ, Ltd. (Filed as Exhibit 10.6 to Form 8-K filed on 5 March 2010 and incorporated herein by reference.)*
10.18	Credit Agreement dated March 31, 2010 among Air Products and Chemicals, Inc., the lenders parties thereto and JPMorgan Chase Bank, N.A., as administrative agent. (Filed as Exhibit 10.7 to the Company's Form 10-Q Report for the quarter ended March 31 2010.)*
10.19	Revolving Credit Facility dated as of 30 April 2013 for \$2,500,000,000. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 30 June 2013.)*
10.19(a)	Amendment No.1 dated as of 22 July 2013, to the Revolving Credit Agreement dated as of 30 April 2013.
10.20	Air Products and Chemicals, Inc. Corporate Executive Committee Separation Program as amended effective as of 14 September 2011. (Filed as Exhibit 10.20 to the Company's Form 10-K Report for the fiscal year ended 30 September 2011.)*
10.21	Form of Change in Control Severance Agreement for an Executive Officer. (Filed as Exhibit 10.21 to the Company's Form 10-K Report for the fiscal year ended 30 September 2011.)*
10.22	Compensation Program for Directors effective 1 October 2012. (Filed as Exhibit 10.22(a) to the Company's Form 10-K Report for the fiscal year ended 30 September 2012.)*
10.22(a)	Compensation Program for Directors effective 1 October 2013.
12	Computation of Ratios of Earnings to Fixed Charges.
14	Code of Conduct revised on 17 May 2012. (Filed as Exhibit 14 to the Company's Form 8-K Report filed on 23 May 2012.)*
21	Subsidiaries of the registrant.
(23)	Consents of Experts and Counsel.
23.1	Consent of Independent Registered Public Accounting Firm.
24	Power of Attorney.
(31)	Rule 13a-14(a)/15d-14(a) Certifications.
31.1	Certification by the Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification by the Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
(32)	Section 1350 Certifications.
32.1	Certification by the Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document

**Table of Contents**

101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase

\* Previously filed as indicated and incorporated herein by reference. Exhibits incorporated by reference are located in SEC File No. 1-4534.

The certification attached as Exhibit 32.1 that accompanies this Annual Report on Form 10-K, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Air Products and Chemicals, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-K, irrespective of any general incorporation language contained in such filing.