

AIR PRODUCTS & CHEMICALS INC /DE/

Form 10-K

November 26, 2008

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

FORM 10-K

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934**

For the fiscal year ended 30 September 2008

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.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction
of Incorporation or Organization)

23-1274455

(IRS Employer Identification No.)

7201 Hamilton Boulevard, Allentown, Pennsylvania

(Address of Principal Executive Offices)

18195-1501

(Zip Code)

Registrant's telephone number, including area code

(610) 481-4911

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

Title of Each Class

Name of Each Exchange on Which Registered

Common Stock, par value \$1.00 per share

New York

Preferred Stock Purchase Rights

New York

8³/₄ % Debentures Due 2021

New York

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

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 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. (Check one):

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

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

YES NO

The aggregate market value of the voting stock held by non-affiliates of the registrant on 31 March 2008 was approximately \$19.4 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 17 November 2008 was 209,566,838.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Annual Report to Shareholders for the fiscal year ended 30 September 2008 are incorporated by reference into Parts I, II and IV of this report. Portions of the registrant's definitive Proxy Statement for the 2009 Annual Meeting of Shareholders are incorporated by reference into Part III.

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PART I

ITEM 1. BUSINESS.

GENERAL DESCRIPTION OF BUSINESS AND FISCAL YEAR 2008 DEVELOPMENTS

Air Products and Chemicals, Inc. (the Company), a Delaware corporation originally founded in 1940, serves technology, energy, industrial and healthcare 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 semiconductor materials, refinery hydrogen, natural gas liquefaction and advanced coatings and adhesives. As used in this Report, unless the context indicates otherwise, the term Company includes subsidiaries and predecessors of the registrant and its subsidiaries.

In January 2008, the Company sold its interest in the vinyl acetate ethylene polymers joint ventures to Wacker Chemie AG, its long time joint venture partner. The Company completed the sale of the Polymers Emulsions business with the sale of the two remaining production facilities in Elkton, Maryland and Piedmont, South Carolina and the related North American atmospheric emulsions and pressure sensitive adhesives businesses in June. During fiscal 2008, the Company also sold the High Purity Process Chemicals business which had previously been reported as part of the Electronics and Performance Materials operating segment. In July 2008, the Board of Directors authorized management to pursue the sale of the U.S. Healthcare business. In September 2008, the Company sold the healthcare business related to several New York and New Jersey locations, followed by the sale of the seating and mobility unit in October.

Previously, the Company reported results for a Chemicals segment, which consisted of the Polymer Emulsions business and the Polyurethane Intermediates (PUI) business, and a Healthcare segment. Beginning with the first quarter of 2008, the Polymer Emulsions business was accounted for as discontinued operations, and the PUI business was reported as part of the Tonnage Gases segment. Beginning with the fourth quarter of 2008, the U.S. Healthcare business was accounted for as discontinued operations and the Europe Healthcare business was reported as part of the Merchant Gases segment. The Company now 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 ABOUT SEGMENTS

Financial information concerning the Company's four business segments appears in Note 22 to the Consolidated Financial Statements included under Item 8 herein.

NARRATIVE DESCRIPTION OF BUSINESS BY SEGMENTS

MERCHANT GASES

Merchant Gases sells industrial gases such as oxygen, nitrogen and argon (primarily recovered by the cryogenic distillation of air), 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, steel, general manufacturing and petroleum and natural gas industries.

Merchant Gases includes the following types of products:

- (1) *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.
- (2) *Packaged gases* Small quantities of product are delivered in either cylinders or dewars. The Company operates packaged gas businesses in Europe, Asia and Brazil. In the United States, the Company's packaged gas business sells products only for the electronics and magnetic resonance imaging (principally helium) industries.
- (3) *Small on-site plants* Customers receive product through small on-sites (cryogenic or non-cryogenic generators) either by a sale of gas contract or the sale of the equipment to the customer.

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(4) *Healthcare products* Customers receive respiratory therapies, home medical equipment and infusion services. These products and services are provided to patients in their homes, primarily in Europe. The Company has leading market positions in Spain, Portugal, the United Kingdom and Mexico through its equity affiliate.

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 prices through pricing formulas and surcharges. A shortage or interruption of electricity or natural gas supply, or a price increase that cannot be passed through to customers, possibly for competitive reasons, may adversely affect the operations or results of Merchant Gases. During fiscal year 2008, no significant difficulties were encountered in obtaining adequate supplies of energy or raw materials; however, the Company did experience significant increases in energy costs in most regions, resulting in the need to increase industrial gas pricing.

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.). Competition in industrial gases is based primarily on price, reliability of supply and the development of industrial gas applications. Competition in the healthcare business involves regulatory compliance, price, quality, service and reliability of supply. In Europe, primary competitors include the same three global industrial gas companies mentioned previously.

Merchant Gases sales constituted approximately 40.3 percent of the Company's consolidated sales in fiscal year 2008, 38.9 percent in fiscal year 2007 and 38.1 percent in fiscal year 2006. Sales of atmospheric gases (oxygen, nitrogen and argon) constituted approximately 18 percent of the Company's consolidated sales in fiscal year 2008, 19 percent in fiscal year 2007 and 20 percent in fiscal year 2006.

TONNAGE GASES

Tonnage Gases provides hydrogen, carbon monoxide, nitrogen, oxygen and syngas 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 fifteen to twenty 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 utilizes nitrogen for inerting and oxygen for the manufacture of steel and certain non-ferrous metals. The chemical industry uses hydrogen, oxygen, nitrogen, carbon monoxide and synthesis gas (a hydrogen-carbon monoxide mixture) as feedstocks in the production of many basic chemicals. The Company delivers product through pipelines from centrally located facilities in or near the Texas Gulf Coast; Los Angeles, California; Louisiana; Alberta, Canada; Rotterdam, the Netherlands; Southern England, U.K.; Northern England, U.K. to Western Belgium; Ulsan, Korea; Tangshan, China; Kuan Yin, Taiwan; Singapore; and Camaçari, Brazil. The Company owns less than controlling interests in pipelines located in Thailand, Singapore and South Africa.

Tonnage Gases also includes a Polyurethanes Intermediate (PUI) business. At its Pasadena, Texas facility, the Company produces di-nitrotoluene (DNT) which is converted to toluene diamine (TDA) and sold for use as an intermediate in the manufacture of a major precursor of flexible polyurethane foam used in furniture cushioning, carpet underlay, bedding and seating in automobiles. Most of the Company's TDA is sold under long-term contracts with raw material cost and currency pass-through to a small number of customers. The Company employs proprietary technology and scale of production to differentiate its polyurethane intermediates from those of its competitors.

Natural gas is the principal raw material for hydrogen, carbon monoxide and synthesis gas production. Electric power is the largest cost component in the production of atmospheric gases. The Company mitigates energy and natural gas prices through long-term cost-pass-through contracts. Toluene, ammonia and hydrogen are the principal raw materials for the PUI business and are purchased from various suppliers under multi-year contracts. During fiscal year 2008, no significant difficulties were encountered in obtaining adequate supplies of energy or raw materials.

Tonnage Gases competes in the United States and Canada against three global industrial gas companies: L Air Liquide S.A., Linde AG and Praxair, Inc., and several regional sellers for gases. 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. Similar competitive situations exist in the European and

Asian industrial gas markets where the Company competes against the three global companies as well as regional competitors. Global competitors for the PUI business are primarily BASF Corporation and Bayer AG. Tonnage Gases sales constituted approximately 34 percent of the Company's consolidated sales in fiscal year 2008, 32 percent in fiscal year 2007 and 32 percent in fiscal year 2006. Tonnage Gases hydrogen sales constituted approximately

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17 percent of the Company's consolidated sales in fiscal year 2008, 17 percent in fiscal year 2007 and 16 percent in fiscal year 2006.

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, silane, arsine, phosphine, white ammonia, silicon tetrafluoride, carbon tetrafluoride, hexafluoromethane, critical etch gases and tungsten hexafluoride), as well as tonnage gases (primarily nitrogen), specialty chemicals, services and equipment for the manufacture of silicon and compound semiconductors, thin film transistor liquid crystal displays and photovoltaic devices. 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 and Shanghai, 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 and specialty surfactants for formulated systems.

The Electronics and Performance Materials segment uses a wide variety of raw materials, including alcohols, ethyleneamines, cyclohexamine, acrylonitriles and glycols. During fiscal year 2008, no significant difficulties were encountered in obtaining adequate supplies of energy or raw materials.

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 21 percent of the Company's consolidated sales in fiscal year 2008, 23 percent in fiscal year 2007 and 23 percent in fiscal year 2006.

EQUIPMENT AND ENERGY

Equipment and Energy designs and manufactures cryogenic and gas processing equipment for air separation (utilizing membrane technology and adsorption technology), hydrocarbon recovery and purification, natural gas liquefaction (known as 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 desulphurization facilities and its development of hydrogen as an energy carrier and oxygen-based technologies to serve energy markets in the future. The Company owns and operates a cogeneration facility in Calvert City, Kentucky; operates and owns fifty percent interests in a 49-megawatt fluidized-bed coal-fired power generation facility in Stockton, California and a 24-megawatt gas-fired combined-cycle power generation facility near Rotterdam, the Netherlands; and operates and owns a 47.9 percent interest in a 112-megawatt gas-fueled power generation facility in Thailand. The Company also operates and owns a fifty percent interest in a flue gas desulphurization 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. Coal, petroleum coke and natural gas are the largest cost components in the production of energy. The Company mitigates these cost components, in part, through long-term cost-pass-through contracts. During fiscal year 2008, 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 (including equity affiliates) was approximately \$399 million on 30 September 2008, approximately 76 percent of which is for

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cryogenic air separation equipment and 8 percent of which is for LNG heat exchangers, as compared with a total backlog of approximately \$258 million on 30 September 2007. The Company expects that approximately \$289 million of the backlog on 30 September 2008 will be completed during fiscal year 2009.

NARRATIVE DESCRIPTION OF THE COMPANY'S BUSINESS GENERALLY

FOREIGN OPERATIONS

The Company, through subsidiaries, affiliates and minority-owned ventures, conducts business in over forty 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, 17 European countries (including the United Kingdom and Spain), 10 Asian countries (including China, Korea, Singapore and Taiwan) and four Latin American countries (including Mexico and Brazil). 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, Korea, India, Singapore, Thailand, South Africa and Mexico).

Financial information about the Company's foreign operations and investments is included in Notes 8, 17 and 22 to the Consolidated Financial Statements included under Item 8 herein. Information about foreign currency translation is included under Foreign Currency in Note 1 and information on the Company's exposure to currency fluctuations is included under Currency Risk Management in Note 6 to the Consolidated Financial Statements included under Item 8 below and in Management's Discussion and Analysis of Financial Condition and Results of Operations under Foreign Currency Exchange Rate Risk included under Item 7 below. Export sales from operations in the United States to unaffiliated customers amounted to \$629 million, \$677 million and \$709 million in fiscal years 2008, 2007 and 2006, respectively. Total export sales in fiscal year 2008 included \$505 million in export sales to affiliated customers. The sales to affiliated customers were primarily equipment sales within the Equipment and Energy segment and Electronics and Performance Materials sales.

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), the United Kingdom (Basingstoke, London and Carrington); Germany (Hamburg); the Netherlands (Utrecht); Spain (Barcelona and Madrid) and Asia (Tokyo, Japan; Shanghai, China; Giheung, Korea; and Hsinchu, Taiwan). 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 materials, process and analytical centers, support the research efforts of various businesses throughout the Company. Technology development efforts for use within Merchant Gases, Tonnage Gases and Equipment and Energy focus 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 is primarily concerned with 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 \$131 million during fiscal year 2008, \$129 million in fiscal year 2007 and \$140 million in fiscal year 2006, and the Company expended \$25 million on customer-sponsored research activities during fiscal year 2008, \$19 million in fiscal year 2007 and \$21 million in fiscal year 2006.

As of 1 November 2008, the Company owned 983 United States patents and 3,030 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 (the federal Superfund law), similar state laws and the Resource Conservation and Recovery Act (RCRA) relating to the

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designation of certain sites for investigation and possible cleanup. Additional information with respect to these proceedings is included under Item 3, Legal Proceedings, below. The Company's accounting policies on environmental expenditures are discussed in Note 1 and particulars on environmental loss contingencies are provided in Note 19 to the Consolidated Financial Statements included under Item 8 below.

The amounts charged to income from continuing operations on an after-tax basis related to environmental matters totaled \$31 million in fiscal 2008, \$25 million in 2007 and \$26 million in 2006. These amounts represent an estimate of expenses for compliance with environmental laws, remedial activities and activities undertaken to meet internal Company standards. Such costs are estimated to be \$22 million in 2009 and \$23 million in 2010.

Although precise amounts are difficult to define, the Company estimates that in fiscal year 2008 it spent approximately \$7 million on capital projects to control pollution versus \$11 million in 2007. Capital expenditures to control pollution in future years are estimated at approximately \$8 million in 2009 and \$7 million in 2010. The cost of any environmental compliance generally is contractually passed through to the customer.

The Company accrues 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 \$82 million to a reasonably possible upper exposure of \$95 million. The accrual on the balance sheet for 30 September 2008 was \$82.9 million and for 30 September 2007 was \$52.2 million. Actual costs to be incurred in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures. Subject to the imprecision in estimating future environmental costs, the Company does not expect that any sum it may have to pay in connection with environmental matters in excess of the amounts recorded or disclosed above would have a materially adverse effect on its financial condition or results of operations in any one year.

EMPLOYEES

On 30 September 2008, the Company (including majority-owned subsidiaries) had approximately 21,100 employees, of whom approximately 20,600 were full-time employees and of whom approximately 11,600 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 and does not believe that the impact of any expiring or expired collective bargaining agreements will result in a material adverse impact on the Company.

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 Exchange Act (the 1934 Act Reports), are available free of charge through the Company's Internet website at 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.

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.

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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, medical, specialty gas and crude helium inventories supplied to customers through liquid bulk and packaged gases supply modes. Merchant Gases inventory also includes home medical equipment to serve healthcare patients. Electronics inventories consist primarily of bulk and packaged specialty gases and chemicals and also include inventories to support sales of equipment and services. Performance Materials inventories consist primarily of bulk and packaged performance chemical solutions. The Tonnage Gases inventory is primarily Polyurethane Intermediates raw materials and finished goods; the remaining on-site plants and pipeline complexes have limited inventory. Equipment and Energy has limited inventory.

CUSTOMERS

There is no single or small number of customers upon which the Company is dependent.

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 the Company's business as a whole.

EXECUTIVE OFFICERS OF THE COMPANY

The Company's executive officers and their respective positions and ages on 15 November 2008 follow. Except where indicated, each of the executive officers listed below has been employed by the Company in the position indicated during the past five fiscal years. Information with respect to offices held is stated in fiscal years.

| Name | Age | Office |
|-----------------------|------------|---|
| M. Scott Crocco | 44 | Vice President and Corporate Controller (became Vice President in 2008; Corporate Controller in 2007; and Director of Corporate Decision Support in 2003) |
| Robert D. Dixon (A) | 49 | Senior Vice President and General Manager Merchant Gases (became Senior Vice President in 2008; Vice President and General Manager Merchant Gases in 2007; President Air Products Asia in 2003; and Vice President Air Products Asia in 2003) |
| Michael F. Hilton (A) | 54 | Senior Vice President and General Manager Electronics and Performance Materials (became Senior Vice President in 2008; Vice President and General Manager Electronics and Performance Materials in 2007; and Vice President Electronics Businesses in 2003) |
| Paul E. Huck (A) | 58 | Senior Vice President and Chief Financial Officer (became Senior Vice President in 2008; Vice President and Chief Financial Officer in 2004) |
| Stephen J. Jones (A) | 47 | Senior Vice President, General Counsel and Secretary (became Senior Vice President, General Counsel and Secretary in 2008; Vice President and Associate General Counsel in 2007; and Vice President and General Manager Industrial Chemicals Division in 2003) |
| John W. Marsland (A) | 42 | Vice President Business Services (became Vice President Business Services in 2009; Vice President and General Manager Healthcare in 2007; Vice President and General Manager, Global Healthcare in 2005; and Vice President Corporate Development Office in 2003) |

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| Name | Age | Office |
|------------------------------|------------|--|
| John E. McGlade (A)(B)(C) | 54 | President and Chief Executive Officer (became Chief Executive Officer in 2008; President and Chief Operating Officer in 2006; Group Vice President Chemicals in 2003) |
| Lynn C. Minella (A) | 50 | Senior Vice President Human Resources and Communications (became Senior Vice President Human Resources and Communications in 2008; Vice President Human Resources in 2004) |
| Scott A. Sherman (A) | 57 | Senior Vice President and General Manager Tonnage Gases, Equipment and Energy (became Senior Vice President in 2008; Vice President and General Manager Tonnage Gases, Equipment and Energy in 2007; and Vice President and General Manager Energy and Process Industries in 2001) |

(A) Member,
Corporate
Executive
Committee

(B) Member, Board
of Directors

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

ITEM 1A. RISK FACTORS.

The Company operates in over 40 countries around the world and faces a variety of risks and uncertainties that could materially affect its future operations and financial performance. Many of these risks and uncertainties are not within the Company's control. Risks that may significantly impact the Company include the following:

Overall Economic Conditions Weakening general economic conditions in markets in which the Company does business may decrease the demand for its goods and services or its profitability.

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. Currently, deteriorating economic conditions in the U.S. and other countries and in industries served by the Company may negatively impact demand for the Company's products and services, in turn negatively impacting the Company's revenues and earnings. Excess capacity in the Company's or its competitors' manufacturing facilities could decrease the Company's ability to generate profits. Unanticipated contract terminations or project delays by current customers can also negatively impact financial results.

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

Weakening demand may create underutilization of the Company's manufacturing capacity or elimination of product lines; contract terminations or customer shut downs may force sale or abandonment of facilities and equipment; contractual provisions may allow customer buy out of facilities or equipment; or other events associated with weakening economic conditions or specific product or customer events may require the Company to record an impairment on tangible assets such as facilities and equipment as well as intangible assets such as intellectual property

or goodwill, which would have a negative impact on the Company's 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 all 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 can materially affect pricing of the Company's products or its market share, causing an adverse impact on revenues and/or profitability.

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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.

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. Hydrocarbons, including natural gas, are the primary feedstock for the production of hydrogen, carbon monoxide and synthesis gas. The Electronics and Performance Materials segment uses a wide variety of raw materials, including alcohols, ethyleneamines, cyclohexamines, acrylonitriles and glycols. Shortages or price escalation in these materials could negatively impact financial results. A disruption in the supply of energy and raw materials, whether due to market conditions, natural events or other disruption, could prevent the Company from meeting its contractual commitments, harming its business and 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 materials 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 Changes 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 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. 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 Company products to and from some markets or increase the cost of doing so. Changes in tax laws and regulations and international tax treaties could affect the financial results of the Company's businesses.

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, regulations 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 mandatory reporting and anticipated constraints on GHG emissions in California and Ontario. In addition, 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 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 potential increased cost 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 its manufacturing operations. 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.

Foreign Operations, Political and Legal Risks The Company's foreign operations can be adversely impacted by nationalization or expropriation of property, undeveloped property rights and legal systems or political instability.

The Company's operations in certain foreign jurisdictions are subject 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

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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.

Interest Rate Fluctuations The Company's earnings, cash flow and financial position can be impacted by interest rate increases.

At 30 September 2008, the Company had total consolidated debt of \$3,966.8 million, of which approximately \$451.4 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.

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

A substantial amount of the Company's sales are derived from outside the United States, a significant portion of which are denominated in foreign currencies. The Company also has significant production facilities which 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 "Market Ratio and Sensitivity Analysis" included in 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; health epidemics and pandemics; 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, 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.

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 on-going operations, financial results and cash flow. The Company's operating results are dependent on the continued operation of its production facilities and its ability to meet customer requirements. Insufficient capacity may expose the Company to liabilities related to contract commitments. 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 business 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.

The Company utilizes a global enterprise resource planning (ERP) system and other technologies for the distribution of information both within the Company and to customers and suppliers. The ERP system and other technologies are potentially vulnerable to interruption from viruses, hackers or system breakdown. To mitigate these risks, the Company has implemented a variety of security measures, including virus protection, a state of the art data center, redundancy procedures

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and recovery processes. A significant system interruption, however, could materially affect the Company's operations, business reputation and financial results.

Litigation and Regulatory Proceedings The Company's financial results may be affected by various legal and regulatory proceedings, including those involving antitrust, 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 reliably predict. 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 of 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 Note 19 to the Consolidated Financial Statements included in Item 8 below.

Recruiting and Retaining Employees Inability to attract, retain or develop skilled employees could adversely impact the Company's business.

Sustaining and growing the Company's business depend on the recruitment, development and retention of qualified employees. Demographic trends and changes in the geographic concentration of global businesses have created more competition for talent. The inability to attract, develop or retain quality employees could negatively impact the Company's ability to take on new projects and sustain its operations which might adversely affect the Company's operations or its ability to grow.

Portfolio Management The success of portfolio management activities is not predictable

The Company continuously reviews and manages its portfolio of assets in order to maximize value for its shareholders. Portfolio management involves many variables, including future acquisitions and divestitures, restructurings and resegmentations and cost-cutting and productivity initiatives. The timing, impact and ability to complete such undertakings, the costs and financial charges associated with such activities and the ultimate financial impact of such undertakings are uncertain and can have a negative short or long-term impact on the Company's operations and financial results.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

The Company has not received any written comments from the Commission staff that remain unresolved.

ITEM 2. PROPERTIES.

The Company owns its principal executive offices, which are located at its headquarters in Trexlertown, Pennsylvania, and also owns additional principal administrative offices in Hersham, near London, England and in Hattingen, Germany. Its principal Asian administrative offices, which are leased, are located in Hong Kong; Shanghai, China; Taipei, Taiwan; and Singapore. Additional administrative offices are leased in Ontario, Canada; Kawasaki, Japan; Seoul, Korea; Petaling Jaya, Malaysia; Brussels, Belgium; Paris, France; Barcelona, Spain; Rotterdam, the Netherlands; and São Paulo, Brazil. Management believes the Company's manufacturing facilities, described in more detail below, are adequate to support its businesses.

Following is a description of the properties used by the Company's four business segments:

MERCHANT GASES

Merchant Gases currently operates over 160 facilities across the United States and in Canada (approximately 40 of which sites are owned), over 160 sites in Europe including healthcare (approximately half of which sites are owned) and over 50 facilities in seven countries within Asia and in Brazil. Helium is recovered at sites in Kansas and Texas and distributed from several transfill sites in the U.S., Europe and Asia. Sales support offices are located at its Trexlertown headquarters as well as in leased properties in three states, at several sites in Europe and at 15 sites in Asia. R&D activities for this segment are conducted in the Trexlertown, Pennsylvania laboratory facilities.

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TONNAGE GASES

Tonnage Gases operates 50 plants in the United States and Canada that produce over 300 standard tons-per-day of product. Over 30 of these facilities produce or recover hydrogen, many of which support the three major pipeline systems located along the Gulf Coast of Texas, on the Mississippi River corridor and in Los Angeles, California. The Tonnage Gases segment includes a facility in Pasadena, Texas that produces Polyurethane Intermediate products. The segment also operates over 30 tonnage plants in Europe and 17 tonnage plants within Asia, the majority of which are on leasehold type long term structured agreements. Sales support offices are located at the Company's headquarters in Trexlertown, Pennsylvania, as well as in leased offices in Texas, Louisiana, California and Calgary, Alberta.

ELECTRONICS AND PERFORMANCE MATERIALS

The electronics business within the Electronics and Performance Materials segment produces, packages and stores nitrogen, specialty gases and electronic chemicals at over 40 sites in the United States (the majority of which are leased), nine facilities (including sales offices) in Europe and over 40 facilities in Asia (approximately half of which are located on customer sites).

The performance materials portion of this segment operates facilities in Los Angeles, California; Calvert City, Kentucky; Paulsboro, New Jersey; Wichita, Kansas; Milton, Wisconsin; Reserve, Louisiana; Clayton, U.K.; Singapore; Isehara, Japan; and Changzhou, China. A specialty amines facility is currently under construction in Nanjing, China. Substantially all of the performance materials properties are owned.

This segment has eight field sales offices in the United States as well as sales offices in Europe, Taiwan, Korea, Singapore and China, the majority of which are leased. The segment conducts R&D related activities at nine locations worldwide.

EQUIPMENT AND ENERGY

Equipment and Energy operates seven manufacturing plants and two sales offices in the U.S. The Company manufactures a significant portion of the world's supply of LNG equipment at its Wilkes-Barre, Pennsylvania site. Air separation columns and cold boxes for Company-owned facilities and third party sales are produced by operations in Acrefair in the United Kingdom and in Caojing, China, as well as in the Wilkes-Barre facility when capacity is available. Cryogenic transportation containers for liquid helium are manufactured and reconstructed at facilities in eastern Pennsylvania and Liberal, Kansas. A new facility in Istres, France is scheduled for start-up in 2009, which will reconstruct cryogenic transportation containers. Offices in Hersham, United Kingdom and Shanghai, China house equipment commercial team members.

Electric power is produced at various facilities including Stockton, California; Calvert City, Kentucky; and Rotterdam, the Netherlands. Flue gas desulfurization operations are conducted at the Pure Air facility in Chesterton, Indiana. Additionally, the Company owns a 47.9 percent interest in a gas-fueled power generation facility in Thailand. The Company or its affiliates own approximately 50 percent of the real estate in this segment and lease the remaining 50 percent.

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 the Company's business, such litigation could result in large monetary awards, especially if a civil jury is allowed to determine compensatory and/or punitive damages. However, the Company believes that litigation currently pending to which it is a party will be resolved without any material adverse effect on its financial position, earnings or cash flows.

The Company is also from time to time involved in certain competition, environmental, health and safety proceedings involving governmental authorities. 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 31 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 manufacturing sites. The Company does not expect that any sums it may have to pay in connection with these matters

would have a materially adverse effect on its

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consolidated financial position. Additional information on the Company's environmental exposure is included under Narrative Description of the Company's Business Generally Environmental Controls.

On 13 March 2008, the Company was notified that the U.S. Environmental Protection Agency had made a referral to the U.S. Department of Justice concerning alleged violations of the Resource Conservation and Recovery Act (RCRA) related to sulfuric acid exchange at the Company's Pasadena, Texas facility. The Company disputes these allegations, has been in active discussions with the Department of Justice on the matter and believes the matter will be resolved without legal action. However, the Company cannot, at this time, reasonably predict the ultimate outcome of any proceedings that might be instituted or the sanctions, if any, that could be imposed, but the Company does not expect that any sums it may have to pay in connection with this matter would have a materially adverse effect on its consolidated financial position or net cash flows.

During the third quarter of 2008, a unit of the Brazilian Ministry of Justice issued a report (previously issued in January, 2007, and then withdrawn) on its investigation of the Company's Brazilian subsidiary, Air Products Brasil Ltda. and several other Brazilian industrial gas companies. The report recommended that the Brazilian Administrative Council for Economic Defense impose sanctions on Air Products Brasil Ltda. and the other industrial gas companies for alleged anticompetitive activities. The Company intends to defend this action and cannot, at this time, reasonably predict the ultimate outcome of the proceedings or sanctions, if any, that will be imposed. While the Company does not expect that any sums it may have to pay in connection with this or any other legal proceeding would have a materially adverse effect on its consolidated financial position or net cash flows, a future charge for regulatory fines or damage awards could have a significant impact on the Company's net income in the period in which it is recorded.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

Not applicable.

PART II

**ITEM 5. MARKET FOR REGISTRANT'S
COMMON EQUITY, RELATED
STOCKHOLDER MATTERS AND ISSUER
PURCHASES OF EQUITY SECURITIES.**

The Company's common stock (ticker symbol APD) is listed on the New York Stock Exchange. 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. The Company's objective is to pay dividends consistent with the reinvestment of earnings necessary for long-term growth. It is the Company's expectation that comparable cash dividends will continue to be paid in the future.

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Quarterly Stock Information

| 2008 | High | Low | Close | Dividend |
|--------|----------|---------|---------|----------|
| First | \$105.02 | \$92.05 | \$98.63 | \$.38 |
| Second | 98.80 | 80.73 | 92.00 | .44 |
| Third | 106.06 | 92.20 | 98.86 | .44 |
| Fourth | 100.14 | 65.05 | 68.49 | .44 |
| | | | | \$1.70 |
| 2007 | High | Low | Close | Dividend |
| First | \$72.45 | \$66.19 | \$70.28 | \$.34 |
| Second | 78.63 | 68.58 | 73.96 | .38 |
| Third | 82.74 | 73.30 | 80.37 | .38 |
| Fourth | 98.51 | 77.26 | 97.76 | .38 |
| | | | | \$1.48 |

The Company has authority to issue 25,000,000 shares of preferred stock in series. The Board of Directors is authorized to designate the series and to fix the relative voting, dividend, conversion, liquidation, redemption and other rights, preferences and limitations. When preferred stock is issued, holders of Common Stock are subject to the dividend and liquidation preferences and other prior rights of the preferred stock. There currently is no preferred stock outstanding. The Company's Transfer Agent and Registrar is American Stock Transfer and Trust Company, 59 Maiden Lane, Plaza Level, New York, New York 10038, telephone (800) 937-5449 (U.S. and Canada) or (718) 921-8124 (all other locations), Internet website www.amstock.com, and e-mail address info@amstock.com. As of 31 October 2008, there were 8,846 record holders of the Company's common stock.

Table of Contents**Purchases of Equity Securities by the Issuer**

The Company continued a stock repurchase program as described in footnotes 1 and 2 to the following table. As of 30 September 2008, the Company had purchased 23.7 million of its outstanding shares at a cost of \$1,850.8 million.

Purchases of equity securities by the issuer during the fourth quarter of fiscal 2008 are as follows:

| Period | (a) Total Number of Shares (or Units) Purchased | (b) Average Price Paid per Share (or Unit) | (c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs | (d) Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs ⁽¹⁾ _{(2) (3)} |
|---------------|---|---|--|---|
| 7/1 - 7/31/08 | 0 | 0 | 0 | \$ 882,343,346 |
| 8/1 - 8/31/08 | 1,474,094 | \$ 90.34 | 1,474,094 | \$ 749,169,984 |
| 9/1 - 9/30/08 | 1,160,986 | \$ 86.12 | 1,160,986 | \$ 649,183,626 |
| TOTAL | 2,635,080 | \$ 88.48 | 2,635,080 | \$ 649,183,626 |

(1) On 22 March 2006, the Company announced plans to purchase up to \$1.5 billion of Air Products and Chemicals, Inc. common stock under a share repurchase program approved by the Company's Board of Directors on 16 March 2006. This program was completed during the second quarter of fiscal year 2008.

(2) On 20 September 2007, the Company's Board of Directors

authorized the repurchase of an additional \$1 billion of common stock. The program does not have a stated expiration date. This additional \$1 billion program will be completed at the Company's discretion while maintaining sufficient funds for investing in its businesses and growth opportunities.

- (3) For the quarter ending 30 September 2008, the Company expended \$233.2 million in cash for the repurchase of shares.

ITEM 6. SELECTED FINANCIAL DATA.

The tabular information appearing under Five-Year Summary of Selected Financial Data on page 71 of the Financials of the 2008 Annual Report to Shareholders is incorporated herein by reference.

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

The textual information appearing under Management's Discussion and Analysis on pages 10 through 31 of the Financials of the 2008 Annual Report to Shareholders is incorporated herein by reference.

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

The textual information appearing under Market Risks and Sensitivity Analysis on page 27 of the Financials of the 2008 Annual Report to Shareholders is incorporated herein by reference.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The consolidated financial statements and the related notes thereto, together with the reports thereon of KPMG LLP dated 25 November 2008, appearing on pages 33 through 71 of the Financials of the 2008 Annual Report to Shareholders, are incorporated herein by reference.

Management's Report on Internal Control Over Financial Reporting, appearing on page 32 of the Financials of the 2008 Annual Report to Shareholders, is incorporated herein by reference.

The Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting, appearing on page 33 of the Financials of the 2008 Annual Report to Shareholders, is incorporated herein by reference.

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The Report of Independent Registered Public Accounting Firm, KPMG LLP, appearing on page 34 of the Financials of the 2008 Annual Report to Shareholders, is incorporated herein by reference.

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 design and operation of the Company's disclosure controls and procedures as of 30 September 2008. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the design and operation of its disclosure controls and procedures have been effective. There has been no change in the Company's internal controls over financial reporting (as that term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) which have occurred during the quarter ended 30 September 2008 that has materially affected, or is reasonably likely to materially affect, the Company's internal controls over financial reporting.

Management's Report on Internal Control Over Financial Reporting is provided under Item 8. Financial Statements and Supplementary Data, 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.

Financial Statements and Supplementary Data, appearing above.

ITEM 9B. OTHER INFORMATION.

Not Applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

The biographical information relating to the Company's directors, appearing in the Proxy Statement relating to the Company's 2009 Annual Meeting of Shareholders (the 2009 Proxy Statement) 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 2009 Proxy Statement under the section, Air Products Stock Beneficially Owned by Officers and Directors, is incorporated herein by reference.

The Company has 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 the Company's Internet website at www.airproducts.com/Responsibility/Governance/Code_of_Conduct/EmployeeCodeofConduct/message.htm.

Information on the Company's procedures regarding its consideration of candidates recommended by shareholders and a procedure for submission of such candidates, appearing in the 2009 Proxy Statement 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 the 2009 Proxy Statement 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 Performance and Ownership, appearing in the 2009 Proxy Statement, is incorporated herein by reference.

Table of Contents**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 2008, about Company stock that may be issued upon the exercise of options, warrants and rights granted to employees or members of the Board of Directors 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 New York Stock Exchange'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 column (a)) |
|--|--|--|---|
| Equity compensation plans approved by security holders | 17,807,862 ⁽¹⁾ | \$ 50.45 | 5,895,018 ⁽²⁾ |
| Equity compensation plans not approved by security holders | 1,373,820 ⁽³⁾ | \$ 36.64 | 0 |
| Total | 19,181,682 | \$ 49.47 | 5,895,018 |

(1) 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.

- (2) Represents authorized shares that were available for future grants as of 30 September 2008. 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.
- (3) Represents outstanding options under Global Employee Stock Awards (219,266), the Stock Incentive Plan (868,963), the Stock Option Plan for Directors (36,000) and the U.K. Savings-Related Share Option Schemes (109,385). This number also includes deferred

stock units granted under the Deferred Compensation Plan for Directors prior to 23 January 2003 (44,782) and deferred stock units under the Deferred Compensation Plan (95,424). Deferred stock units issued under the Deferred Compensation Plan 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.

Global Employee Stock Option Awards and Stock Incentive Program No further awards will be made under these programs. All stock options under these programs were granted at fair market value on the date of grant, first became exercisable three years after grant, and terminate ten years after the date of grant or upon the holder's earlier termination of employment for reasons other than retirement, disability, death or involuntary termination due to Company action necessitated by business conditions.

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Stock Option Plan for Directors No further awards will be made under this plan. All stock options under this plan were granted at fair market value on the date of grant. The options became exercisable six months after grant and remain exercisable for nine and one-half years or, if earlier, two years following the date the director resigns from the Board (other than because of retirement, disability or death). This plan is no longer offered. Stock options may now be granted to directors under the Long-Term Incentive Plan; however, since September 2005, the compensation program for nonemployee directors has not provided stock options.

The Air Products PLC U.K. Savings-Related Share Option Scheme and the Air Products Group Limited U.K. Savings-Related Share Option Scheme (together, the U.K. Plan) are employee benefit plans for employees of Air Products PLC (and certain of its U.K. subsidiaries) and Air Products Group Limited (and certain of its U.K. subsidiaries), respectively (together, the U.K. Companies). No further options will be offered under the U.K. Plan. Employees participate in the U.K. Plan by having elected to do so during a brief invitation period. An employee who elected to participate chose a five- or seven-year option period and has amounts of salary automatically withheld and contributed to a savings account at a bank not affiliated with the Company. At the end of the five-year savings period, a tax-free bonus is added to the employee's account. An employee who elected a seven-year option and retains his savings account for seven years receives a further bonus at the end of the seventh year. At the end of the option period, the participant may use his savings to purchase shares of Company stock at the fixed option price or receive in cash the amount of his savings and bonus(es). His election must be made within six months of the close of the option period. The option price is an amount determined by the directors of the U.K. Companies on the date the option is granted, which may not be less than 90 percent of Market Value (as defined in the U.K. Plan) on the date of grant.

Deferred Compensation Plan for Directors This plan is no longer offered. It was the vehicle for providing deferral stock units to the Company's directors. The compensation program for nonemployee directors provides that directors have the opportunity to purchase deferred stock units with their retainers and meeting fees. New directors and directors continuing in office after the annual meetings are awarded an annual grant of deferred stock units. Each deferred stock unit entitles the director to one share of Company stock when paid out. Deferred stock units also accrue dividend equivalents which are equal to the dividends that would have been paid on a share of stock during the period the units are outstanding. Accumulated dividend equivalents are converted to deferred stock units on a quarterly basis. Deferred stock units are now provided to directors under the Long-Term Incentive 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 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 (elective deferrals) 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 of their salary ranging from 4-6% based on their years of service (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 30 September 2008, and Air Products Stock Beneficially Owned by Officers and Directors, appearing in the 2009 Proxy Statement, is incorporated herein by reference.

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ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

The information appearing in the 2009 Proxy Statement under the sections Director Independence and Transactions with Related Persons are incorporated by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The information appearing in the 2009 Proxy Statement under the section Fees of Independent Registered Public Accountant, is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) The following documents are filed as a part of this Report to the extent below noted:

1. The Financials of the Company's 2008 Annual Report to Shareholders. Information contained therein is not deemed filed except as it is incorporated by reference into this Report. The following financial information is incorporated herein by reference:

(Page references to the Financials of the 2008 Annual Report)

| | |
|--|----|
| Management's Discussion and Analysis | 10 |
| Management's Report on Internal Control over Financial Reporting | 32 |
| Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting | 33 |
| Report of Independent Registered Public Accounting Firm | 34 |
| Consolidated Income Statements for the years ended 30 September 2008, 2007 and 2006 | 35 |
| Consolidated Balance Sheets at 30 September 2008 and 2007 | 36 |
| Consolidated Statements of Cash Flows for the years ended 30 September 2008, 2007 and 2006 | 37 |
| Consolidated Statements of Shareholders' Equity for the years ended 30 September 2008, 2007 and 2006 | 38 |
| Notes to the Consolidated Financial Statements | 39 |
| Business Segment and Geographic Information | 68 |
| Five-Year Summary of Selected Financial Data | 71 |

2. The following additional information should be read in conjunction with the consolidated financial statements in the Company's Financials of the 2008 Annual Report to Shareholders:

(Page references to this Report)

| | |
|--|----|
| Report of Independent Registered Public Accounting Firm on Schedule II | 21 |
| Consolidated Schedule for the years ended 30 September 2008, 2007 and 2006 as follows: | |

Schedule Number

| | |
|--------------------------------------|----|
| II Valuation and Qualifying Accounts | 22 |
|--------------------------------------|----|

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.

Exhibits filed as a part of this Annual Report on Form 10-K are listed in the Index to Exhibits located on page 23 of this Report.

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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/ Paul E. Huck

Paul E. Huck
Senior Vice President and Chief
Financial Officer
(Principal Financial Officer)

Date: 26 November 2008

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) Director, Chairman, President and Chief Executive Officer (Principal Executive Officer) | 26 November 2008 |
| /s/ M. Scott Crocco (M. Scott Crocco) Vice President and Corporate Controller (Principal Accounting Officer) | 26 November 2008 |
| * | 26 November 2008 |
| (Mario L. Baeza) Director | |
| * | 26 November 2008 |
| (William L. Davis, III) Director | |
| * | 26 November 2008 |
| (Michael J. Donahue) Director | |

*

26 November 2008

(Ursula O. Fairbairn)
Director

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| Signature and Title | Date |
|--|------------------|
| * (W. Douglas Ford) Director | 26 November 2008 |
| * (Edward E. Hagenlocker) Director | 26 November 2008 |
| * (Evert Henkes) Director | 26 November 2008 |
| * (Margaret G. McGlynn) Director | 26 November 2008 |
| * (Charles H. Noski) Director | 26 November 2008 |
| * (Lawrence S. Smith) Director | 26 November 2008 |

* Stephen J. Jones, Senior Vice President, General Counsel and Secretary, by signing his 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/ Stephen J. Jones

Stephen J. Jones
Attorney-in-Fact

Date: 26 November 2008

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON SCHEDULE II

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

Under date of 25 November 2008, we reported on the consolidated balance sheets of Air Products and Chemicals, Inc. and subsidiaries as of 30 September 2008 and 2007, and the related consolidated income statements and consolidated statements of shareholders' equity and cash flows for each of the years in the three-year period ended 30 September 2008, as contained in the Annual Report to Shareholders incorporated in the Form 10-K. In connection with our audits of the aforementioned consolidated financial statements, we also audited the related consolidated financial statement schedule referred to in Item 15 (a)(2) in this Form 10-K. This financial statement schedule is the responsibility of the Company's management. Our responsibility is to express an opinion on this financial statement schedule based on our audits.

In our opinion, such 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.

As discussed in Note 2 to the consolidated financial statements, the Company adopted Financial Accounting Standards Board (FASB) Interpretation No. 48, Accounting for Uncertainty in Income Taxes, effective 1 October 2007, Statement of Financial Accounting Standards No. 158, Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans, as of 30 September 2007, and FASB Interpretation No. 47, Accounting for Conditional Asset Retirement Obligations, effective 30 September 2006.

/s/ KPMG LLP

Philadelphia, Pennsylvania

25 November 2008

Table of ContentsSCHEDULE II
CONSOLIDATEDAIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES
SCHEDULE II-VALUATION AND QUALIFYING ACCOUNTS
For the Years Ended 30 September 2008, 2007 and 2006

| Description | Balance at Beginning of period | Additions | | Other Changes Increase (Decrease) | | Balance at End of Period |
|--------------------------------------|---|--------------------------|---|---|--------------|--------------------------------|
| | | Charged to Expense | Charged to other Accounts (in millions of dollars) | Cumulative Translation Adjustment | Other [b] | |
| Year Ended 30 September 2008 | | | | | | |
| Allowance for doubtful accounts | \$24 | \$10 | \$ 4 | \$ | \$(9) | \$29 |
| Allowance for deferred tax assets | 33 | 36 | | | (8) | 61 |
| Year Ended 30 September 2007 | | | | | | |
| Allowance for doubtful accounts | \$21 | \$ 7 | \$ | \$ 1 | \$(5) | \$24 |
| Allowance for deferred tax assets | 37 | (3) | | (1) | | 33 |
| Year Ended 30 September 2006 | | | | | | |
| Allowance for doubtful accounts | \$17 | \$ 9 | \$ | \$ | \$(5) | \$21 |
| Allowance for deferred tax assets | 18 | 2 | 17[a] | | | 37 |

Notes:

[a] Primarily adjustment associated with acquisition of deferred tax asset.

[b] Primarily write-offs of uncollectible trade receivable

accounts and tax
valuation
allowances.

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INDEX TO EXHIBITS

Exhibit No. Description

- (3) Articles of Incorporation and By-Laws.
- 3.1 Amended and Restated By-Laws of the Company. (Filed as Exhibit 99.1 to the Company's Form 8-K Report dated 18 May 2007.)*
- 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.
- (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 The Rules of the United Kingdom Savings-Related Share Option Scheme of the Company as adopted on 24 October 1997, as amended on 1 October 1999 and 5 November 1999. (Filed as Exhibit 10.2 to the Company's Form 10-K Report for the fiscal year ended 30 September 2002.)*
- 10.3 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.)*
- 10.4 Air Products and Chemicals, Inc. Severance Plan effective 15 March 1990. (Filed as Exhibit 10.8(a) to the Company's Form 10-K Report for the fiscal year ended 30 September 1992.)*
- 10.5 Air Products and Chemicals, Inc. Change of Control Severance Plan effective 15 March 1990. (Filed as Exhibit 10.8(b) to the Company's Form 10-K Report for the fiscal year ended 30 September 1992.)*
- 10.6 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.)*
- 10.6(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 Plan, 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.)*
- 10.6(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 Plans, adopted 11 April 2007. (Filed as Exhibit 10.7(b)

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Exhibit No. Description

- 10.7 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.)*
- 10.7(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.)*
- 10.7(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.)*
- 10.8 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.)*
- 10.9 Amended and Restated Annual Incentive Plan of the Company, effective 1 October 2001. (Filed as Exhibit 10.2 to the Company's Form 10-Q Report for the quarter ended 31 March 2002.)*
- 10.9(a) Amendment to the Amended and Restated Annual Incentive Plan of the Company effective 19 July 2006. (Filed as Exhibit 10.11(a) to the Company's Form 10-K Report for the fiscal year ended 30 September 2006.)*
- 10.9 (b) Amendment to the Amended and Restated Annual Incentive Plan of the Company effective 19 September 2007.
- 10.10 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.)*
- 10.11 Terms and Conditions of the Global Employee Stock Option Awards of the Company effective 1 October 1995, 1997 and 1999. (Filed as Exhibit 10.22 to the Company's Form 10-K Report for the fiscal year ended 30 September 2002.)*
- 10.12 Terms and Conditions of the Stock Incentive Awards of the Company effective 1 October 1999, 2000, 2001 and 2002. (Filed as Exhibit 10.19 to the Company's Form 10-K Report for the fiscal year ended 30 September 2004.)*
- 10.13 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.)*
- 10.14 Description of Performance Criteria under the Annual Incentive Plan of the Company. (Filed as Exhibit 10.3 to the Company's Form 10-Q Report for the quarter ended 31 December 2004.)*
- 10.15 Amended and Restated Deferred Compensation Program for Directors, effective 1 October 2005. Effective as of 23 January 2003, this program is offered under the Long-Term Incentive Plan. (Filed as

Exhibit 10.26 to the Company's Form 10-K Report for the fiscal year ended 30 September 2005.)*

- 10.16 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.)*
- 10.17 Amended and Restated Long Term Incentive Plan of the Company, effective 26 January 2006. (Filed as Exhibit 10.1 to the Company's Form 10-Q Report for the quarter ended 31 March 2006.)*
- 10.17 (a) Amendments to the Amended and Restated Long Term Incentive Plan of the Company effective 18 May 2006 and 21 September 2006. (Filed as Exhibit 10.22(a) to the Company's Form 10-K Report for the fiscal year ended 30 September 2006.)*
- 10.17 (b) Amendment to the Amended and Restated Long Term Incentive Plan of the Company effective 17 May 2007.

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Exhibit No. Description

| | |
|-----------|--|
| 10.17 (c) | Amendment to the Amended and Restated Long Term Incentive Plan of the Company effective 1 January 2008. |
| 10.18 | Amended and Restated Deferred Compensation Plan of the Company, formerly known as the Supplementary Savings Plan, effective 1 January 2005, reflecting amendments through 1 September 2006. (Filed as Exhibit 10.23 to the Company's Form 10-K Report for the fiscal year ended 30 September 2006.)* |
| 10.19 | Amended and Restated Supplementary Pension Plan of the Company effective 1 January 2005 reflecting amendments through 30 September 2006. (Filed as Exhibit 10.24 to the Company's Form 10-K Report for the fiscal year ended 30 September 2006.)* |
| 10.20 | Compensation Program for Directors effective 1 October 2008. |
| 10.21 | 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.)* |
| 10.22 | Compensation Program for Nonemployee Directors of the Company, effective 1 October 2007. (Filed as Exhibit 10.26 to the Company's Form 10-K Report for the fiscal year ended 30 September 2007.)* |
| 10.23 | Air Products and Chemicals, Inc. Retirement Savings Plan as amended and restated effective 1 October 2006 to reflect amendments through 30 September 2007. (Filed as Exhibit 10.27 to the Company's Form 10-K Report for the fiscal year ended 30 September 2007.)* |
| 10.24 | 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.)* |
| 10.25 | Air Products and Chemicals, Inc. Corporate Executive Committee Separation Program, as amended and restated effective 1 January 2008. (Filed as Exhibit 10.2 to the Company's Form 10-Q Report for the quarter ended 31 December 2007.)* |
| 10.25(a) | Air Products and Chemicals, Inc. Corporate Executive Committee Separation Program as amended effective 16 July 2008. |
| 10.26 | Change in Control Severance Agreement. (Filed as Exhibit 10.1 to the Company's Form 8-K Report filed on 20 December 2007.)* |
| 12 | Computation of Ratios of Earnings to Fixed Charges. |
| 13 | Financials of the Annual Report to Shareholders for the fiscal year ended 30 September 2008, which is furnished to the Commission for information only and not filed except as portions are expressly incorporated by reference in this Report. |
| 14 | Code of Conduct. (Filed as Exhibit 14 to the Company's Form 10-K Report for the fiscal year ended 30 September 2005.)* |

- 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.

* Previously filed as indicated and incorporated herein by reference. Exhibits incorporated by reference are located in SEC File No. 1-4534.