

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 [NO FEE REQUIRED] FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1998

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED] 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 23-1274455  
(State or other jurisdiction of (IRS Employer Identification No.)  
incorporation or organization)

7201 Hamilton Boulevard 18195-1501  
Allentown, Pennsylvania (Zip Code)  
(Address of principal executive offices)

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 and Pacific
Preferred Stock Purchase Rights	New York and Pacific
8 3/4% Debentures Due 2021	New York

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

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

The aggregate market value of the voting stock held by non-affiliates of the registrant on November 2, 1998 was \$8.96 billion. For purposes of the foregoing calculation (i) 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 and (ii) registrant's Flexible Employee Benefit Trust, described under Item 12 of this Report, is deemed a non-affiliate.

The number of shares of Common Stock outstanding as of November 30, 1998 was 229,304,441.

DOCUMENTS INCORPORATED BY REFERENCE

Annual Report to Shareholders for the fiscal year ended September 30, 1998. With the exception of those portions which are incorporated by reference into Parts I, II and IV of this Form 10-K, the Annual Report is not deemed to be filed.

Proxy Statement for Annual Meeting of Shareholders to be held January 28, 1999. . . Part III.

FORWARD-LOOKING STATEMENTS

The forward-looking statements contained in this document are based on current expectations regarding important risk factors. Actual results may differ materially from those expressed. In addition to important risk factors and uncertainties referred to in the Management's Discussion and Analysis, which is included under Item 7 herein, such as those relating to the Year 2000, other important risk factors and uncertainties include the impact of worldwide economic growth, pricing of both the Company's products and raw materials such as electricity, and other factors resulting from fluctuations in interest rates and foreign currencies, the impact of competitive products and pricing, continued success of work process programs, and the impact of tax and other

TABLE OF CONTENTS

		Page
PART I		
ITEM	1. Business .....	1
	Industrial Gases.....	1
	Chemicals.....	2
	Polymer Chemicals.....	2
	Performance Chemicals.....	3
	Chemical Intermediates.....	3
	Equipment and Services.....	4
	Equipment.....	4
	Power Generation.....	4
	Pure Air.....	4
	General.....	5
	Foreign Operations.....	5
	Technology Development.....	5
	Raw Materials and Energy.....	6
	Environmental Controls.....	6
	Competition.....	7
	Insurance.....	7
	Employees.....	8
	Year 2000.....	8
	Executive Officers of the Company.....	8
ITEM	2. Properties .....	9
	Industrial Gases.....	10
	Chemicals.....	10
	Equipment and Services.....	10
ITEM	3. Legal Proceedings .....	10
ITEM	4. Submission of Matters to a Vote of Security Holders .....	10
PART II		
ITEM	5. Market for the Company's Common Stock and Related Stockholders Matters .....	11
ITEM	6. Selected Financial Data .....	11
ITEM	7. Management's Discussion and Analysis of Financial Condition and Results of Operations .....	11
ITEM	7A. Quantitative and Qualitative Disclosures about Market Risk .....	11
ITEM	8. Financial Statements .....	11
ITEM	9. Disagreements on Accounting and Financial Disclosure .....	11
PART III		
ITEM	10. Directors and Executive Officers of the Company .....	12
ITEM	11. Executive Compensation .....	12
ITEM	12. Security Ownership of Certain Beneficial Owners and Management .....	12
ITEM	13. Certain Relationships and Related Transactions .....	12
PART IV		
ITEM	14. Exhibits, Financial Statement Schedules and Reports on Form 8-K .....	12

## PART I

### ITEM 1. BUSINESS.

Through internal development and by acquisitions, Air Products and Chemicals, Inc. has established an internationally recognized industrial gas and related industrial process equipment business, and developed strong positions as a producer of certain chemicals.

The industrial gases business segment recovers and distributes industrial gases such as oxygen, nitrogen, argon and hydrogen and a variety of medical and specialty gases. The chemicals business segment produces and markets polymer chemicals, performance chemicals and chemical intermediates. The equipment and services business segment supplies cryogenic and other process equipment and related engineering services and includes the Company's power generation business and flue gas treatment business.

Financial information concerning the Company's business segments appears in Note 20 to the Consolidated Financial Statements included under Item 8 herein, which information is incorporated herein by reference, as are all other specific references herein to information appearing in such 1998 Financial Review Section of the Annual Report.

As used in this Report, the term "Air Products" or "Company" includes subsidiaries and predecessors of the registrant or its subsidiaries, unless the context indicates otherwise.

#### INDUSTRIAL GASES

The principal industrial gases sold by the Company are oxygen, nitrogen, argon (primarily recovered by the cryogenic distillation of air), hydrogen, carbon monoxide, carbon dioxide (purchased, purified or recovered through the processing of natural gas or the by-product streams from process plants), synthesis gas (combined streams of hydrogen and carbon monoxide) and helium (purchased or refined from crude helium). Medical and specialty gases are manufactured or blended by the Company or purchased for resale.

The Company's industrial gas business involves two principal modes of supply:

"Tonnage" or "On-site" Supply -- For large volume or "tonnage" users of industrial gases, a plant is built adjacent to or near the customer's facility--hence the term "on-site". Alternatively, the gases are delivered through a pipeline from nearby locations. Supply is generally made under contracts having terms in excess of three years. In at least nine areas--the Houston (Texas) Ship Channel including the Port Arthur, Texas, area; "Silicon Valley", California; Los Angeles, California; Phoenix, Arizona; Decatur, Alabama; Central Louisiana; Rotterdam, the Netherlands; Singapore; and Bahia, Brazil--Air Products' hydrogen, oxygen, carbon monoxide or nitrogen gas pipelines serve multiple customers from one or more centrally located plants. Industrial gas companies in which the Company has less than controlling interests have pipelines in Korea, Thailand, Malaysia, Taiwan and South Africa.

Merchant Supply -- Smaller volumes of industrial gas products are delivered to thousands of customers in liquid or gaseous form by tanker trucks or tube trailers. These merchant customers use equipment designed and installed by Air Products to store the product near the point of use, normally in liquid state, and vaporize the product into gaseous state for their use as needed. Increasingly, some customers are being supplied by small on-site generators using noncryogenic technology based on adsorption and membrane technology, which in certain circumstances, the Company sells to its customers. Merchant customers' contract terms normally are from three to five years. Merchant gases and various specialty gases are also delivered in cylinders, dewars and lecture bottle sizes.

Oxygen, nitrogen, argon and hydrogen sold to merchant customers are usually recovered at large "stand-alone" facilities located near industrial areas or high-tech centers, or at small noncryogenic generators, or are taken from tonnage plants used primarily to supply tonnage users. Tonnage plants are frequently designed to have more capacity than is required by their principal customer to recover additional product that is liquefied for sale to a merchant market. Air Products also designs and builds systems for recovering oxygen, hydrogen, nitrogen, carbon monoxide and low dew point gases using adsorption technology.

Tonnage and merchant sales of atmospheric gases--oxygen, nitrogen and argon--constituted approximately 25% of Air Products' consolidated sales in fiscal 1998 and were approximately 24% and 28% in fiscal years 1997 and 1996, respectively. Tonnage and merchant sales of industrial gases--principally oxygen, nitrogen and hydrogen--to the chemical process industry and the electronics industry, the largest consuming industries, were approximately 14% and 10%, respectively, of Air Products' consolidated sales in fiscal 1998.

Other important consumers of Air Products' industrial and specialty gases are the basic steel industry, the oil industry (which uses inert nitrogen for oil well stimulation and field pressurization and hydrogen and oxygen for refining) and the food industry (which uses liquid nitrogen for food freezing). Air Products believes that it is the largest liquefier of hydrogen, which it supplies to many customers including the National Aeronautics and Space Administration for its space shuttle program.

Helium is sold for use in magnetic resonance imaging equipment, controlled atmospheres processes and welding. Medical gases are sold in the merchant market to hospitals and clinics, primarily for inhalation therapy.

Specialty gases include fluorine products, rare gases such as xenon, krypton and neon and more common gases of high-purity or gases which are precisely blended as mixtures. Specialty chemicals for use by the electronics industry include silane, nitrogen trifluoride, carbon tetrafluoride, hexafluoromethane, and tungsten hexafluoride. These gases and chemicals are used in numerous industries and in electronic and laboratory applications. In certain circumstances, the Company sells equipment related to the use, handling and storage of such specialty gases and specialty chemicals.

Sales of industrial gases to merchant customers and/or sales of specialty products to the electronics industry are made principally through field sales forces from 127 offices in 37 states in the United States and Puerto Rico, and from 163 offices in 24 foreign countries. In addition, industrial gas companies in which the Company has investments operate in 30 foreign countries. See "Foreign Operations" on page 4 of this report.

Electricity and hydrocarbons, including natural gas as a feedstock for producing certain gases, are important to Air Products' industrial gas business. See "Raw Materials and Energy". The Company's large truck fleet, which delivers products to merchant customers, requires a readily available supply of gasoline or diesel fuel. Also, environmental and health laws and regulations will continue to affect the Company's industrial gas businesses. See "Environmental Controls".

#### CHEMICALS

The Company's chemicals businesses consist of polymer chemicals, performance chemicals, and chemical intermediates where the Company is able to differentiate itself by the performance of its products in the customer's application, the technical service which the Company provides, and the scale of production and the production technology employed by the Company.

#### POLYMER CHEMICALS

Air Products' polymer chemicals are water-based and water-soluble products derived primarily from vinyl acetate monomer. The principal products of these businesses are polymer emulsions, pressure sensitive adhesives, and polyvinyl alcohol. Total sales from these businesses constituted approximately 12% of Air Products' consolidated sales in each of fiscal years 1998 and 1997, and 13% in fiscal year 1996.

In October, 1998, the Company and Wacker-Chemie GmbH announced the commencement of their emulsion and redispersible powders joint ventures. Air Products owns 65% of a world-wide joint venture that produces polymer emulsions and pressure sensitive adhesives, which has headquarters and several production facilities in the United States and production facilities in Germany, Mexico, and Korea, and 20% of a world-wide joint venture that produces redispersible powders made from polymer emulsions, which has headquarters in Germany with manufacturing facilities in Germany and the United States.

Polymer Emulsions - The Company's major emulsion products are vinyl acetate homopolymer emulsions and Airflex(R) vinyl acetate-ethylene copolymer emulsions. The Company also produces emulsions which incorporate vinyl chloride and various acrylates in the polymer. These products are used in adhesives, nonwoven fabric binders, paper coatings, paints, inks and carpet backing binder formulations.

Pressure Sensitive Adhesives - These products are water-based acrylic emulsions which are used for both permanent and removable pressure sensitive adhesives primarily for labels and tapes.

Polyvinyl Alcohol - These polymer products are water-soluble synthetic resins which are used in textile warp sizes, surface sizes for paper, adhesives, safety glass laminates and as emulsifying agents in polymerization. As a coproduct of polyvinyl alcohol, acetic acid is a merchant product sold to a variety of markets including textiles, pharmaceuticals and electronics.

#### PERFORMANCE CHEMICALS

Air Products' performance chemicals are differentiated from the competition based on their performance when used in the customer's products and the technical service which the Company provides. The principal products of these businesses are specialty additives, polyurethane additives and epoxy additives. Total sales from these businesses constituted approximately 8% of Air Products' consolidated sales in each of fiscal years 1998 and 1997, and 10% in fiscal year 1996.

Specialty Additives - These products are primarily acetylenic alcohols and amines which are used as performance additives in coatings, lubricants, electro-deposition processes, agricultural formulations and corrosion inhibitors.

Polyurethane Additives - These products include catalysts and surfactants which are used as performance control additives and processing aids in the production of both flexible and rigid polyurethane foam around the world. The principal end markets for polyurethane foams include furniture cushioning, insulation, carpet underlay, bedding and automobile seating.

Epoxy Additives - These products include polyamides, aromatic amines, cycloaliphatic amines, reactive diluents and specialty epoxy resins which are used as performance additives in epoxy formulations by epoxy manufacturers worldwide. The end markets for epoxies are coatings, flooring, adhesives, reinforced composites and electrical laminates.

#### CHEMICAL INTERMEDIATES

The chemical intermediates businesses use the Company's proprietary technology and scale of production to differentiate themselves from the competition. The principal intermediates sold by the Company include amines and polyurethane intermediates. The Company also produces certain industrial chemicals (ammonia, methanol and nitric acid) as raw materials for its differentiated products. Total third-party sales from the chemical intermediates businesses constituted 11% of Air Products' consolidated sales in each of fiscal years 1998, 1997 and 1996.

Amines - The Company produces a broad range of amines using ammonia and methanol, which are both manufactured by Air Products, and other alcohol feedstocks purchased from various suppliers. Other, more specialized amines are produced by the hydrogenation of purchased intermediates. Substantial quantities of these products are sold under long-term contracts to a small number of customers. These products are used by the Company's customers as raw materials in the manufacture of herbicides, pesticides, water treatment chemicals, animal nutrients, polyurethane coatings, artificial sweeteners, rubber chemicals and pharmaceuticals. Ammonia is a feedstock for its alkylamines and the excess over this requirement is marketed as ammonium nitrate prills and solutions, which are primarily used by customers as fertilizers or in other agricultural applications. Methanol is principally used by Air Products as a feedstock in methylamine production and the excess over this requirement is marketed to the methanol market.

Polyurethane Intermediates - The Company produces dinitrotoluene ("DNT") and toluene diamine ("TDA") for use as intermediates by the Company's customers in the manufacture of a major precursor of flexible polyurethane foam. The principal end markets for flexible polyurethane foams include furniture cushioning, carpet underlay, bedding and seating in automobiles. Virtually all of the Company's production of DNT and TDA is sold under long-term contracts to a small number of customers.

\* \* \*

Chemical sales are supported from various locations in the United States, England, Germany, Brazil, Mexico, the Netherlands, Japan, China, Singapore and South Africa and through sales representatives or distributors in most industrialized countries. Dry products are delivered in railcars, trucks, drums, bags and cartons. Liquid products are delivered by barge, rail tank cars, tank-trailers, drums and pails, and, at one location, by pipeline.

The chemicals business depends on adequate energy sources, including natural gas as a feedstock for the production of certain products (see "Raw Materials and Energy"), and will continue to be affected by various environmental and health laws and regulations (see "Environmental Controls").

#### EQUIPMENT AND SERVICES

The equipment business of Air Products designs, manufactures and supplies cryogenic and other process equipment, and includes the Company's power generation business, and its flue gas treatment business.

#### EQUIPMENT

The Company designs and manufactures equipment for cryogenic air separation, gas processing, natural gas liquefaction, and hydrogen purification. Air Products also designs and builds systems for recovering hydrogen, nitrogen, carbon monoxide, carbon dioxide and low dew point gases using membrane technology. Additionally, a broad range of plant design, engineering, procurement, and construction management services is provided for the above areas. Equipment is manufactured for use by the industrial gases segment and for sale in industrial markets which include the Company's international industrial gas affiliates.

The backlog of orders (including letters of intent) believed to be firm from other companies and equity affiliates for equipment was approximately \$302 million on September 30, 1998, approximately 60% of which relates to cryogenic air separation, as compared with a total backlog of approximately \$310 million on September 30, 1997. It is expected that approximately \$249 million of the backlog on September 30, 1998, will be completed during fiscal 1999.

#### POWER GENERATION

Air Products constructed, operates and has a 50% interest in a 49-megawatt fluidized-bed coal-fired power generation facility in Stockton, California; an 85-megawatt coal waste burning power generation facility in western Pennsylvania; a 120-megawatt gas-fired combined cycle power generation facility in Orlando, Florida; and a 24-megawatt gas-fired combined cycle power generation facility near Rotterdam, the Netherlands. A 112-megawatt gas-fueled power generation facility, in which the Company has a 48.9% interest, is expected to begin commercial operation in the first half of 1999 in Thailand that will supply electricity to a state-owned electricity generating authority and steam and electricity to an Air Products industrial gases affiliate.

#### PURE AIR

Pure Air markets, develops, designs and builds flue gas treatment systems. Air Products operates and owns a 50% interest in a facility utilizing Mitsubishi Heavy Industries, Ltd. flue gas desulfurization (FGD) technology systems for removing sulfur dioxide from the flue gas of a coal-fired power generation plant in Indiana.

Additional information with respect to the Company's power generation and flue gas treatment businesses is included in Notes 8 and 16 to the Consolidated Financial Statements included under Item 8 herein.

## GENERAL

### FOREIGN OPERATIONS

Air Products through subsidiaries and affiliates conducts business in numerous countries outside the United States. The structure of the Air Products industrial gas business in Europe mirrors the Company's United States operation. Air Products' international business is 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.

Majority and wholly owned subsidiaries operate in Australia, Argentina, Brazil, Canada and Mexico and in 14 countries in Europe and 7 countries in Asia. The Company also has less than controlling interests in industrial gas companies in Mexico and in 6 countries in Europe and 7 countries in Asia. Air Products also has a 70% owned subsidiary engaged in the specialty gas and helium business in the People's Republic of China, and 50% owned companies in France and South Africa (industrial gases). The Company and a French industrial gas company each have a 24.5% interest in an Algerian company that owns and operates a helium purification and liquefaction plant which provides helium to Air Products and the French industrial gas company.

Financial information about Air Products' foreign operations and investments is included in Notes 8, 10 and 20 to the Consolidated Financial Statements included under Item 8 herein. Information about foreign currency translation is included in Note 1 to the Consolidated Financial Statements included under Item 8 herein, under "Foreign Currency" and information on Company exposure to currency fluctuations is included in Note 5 to the Consolidated Financial Statements included under Item 8 herein, under "Foreign Exchange Contracts". Export sales from operations in the United States to unconsolidated customers amounted to \$650 million, \$571 million and \$459 million in 1998, 1997 and 1996, respectively. Total export sales in fiscal 1998 include \$98 million in export sales to affiliated customers. The sales to affiliated customers were primarily equipment sales.

### TECHNOLOGY DEVELOPMENT

Air Products conducts research and development principally in its laboratories located in Trexlertown, Pennsylvania, as well as in Manchester and Basingstoke, England; Utrecht, the Netherlands and Barcelona, Spain. The Company also funds and works closely on research and development programs with a number of major universities and conducts a sizable amount of research work funded by others, principally the United States Government.

The Company's market-oriented approach to technology development encompasses research and development, and engineering as well as commercial development.

The amount expended by the Company on research and development during fiscal 1998 was \$112 million, and was \$114 million during each of fiscal 1997 and 1996.

In the industrial gases and equipment and services segments, technology development is directed primarily to developing new and improved processes and equipment for the production and delivery of industrial gases and cryogenic fluids, developing new products, and developing new and improved applications for industrial gases. It is through such applications and improvements that the Company has become a major supplier to the electronics, polymer, petroleum, rubber, plastics, food processing and paper industries. Through fundamental research into sieve and polymer materials, advanced process engineering and integrated manufacturing methods, the Company discovers, develops and improves the economics of noncryogenic gas separation technologies. Additionally, technology development for the equipment and services businesses is directed primarily to reducing the capital and operating costs of its facilities and to commercializing new technologies in gas production and separation and in power production.

In the chemicals segment, technology development is primarily concerned with new products and applications to strengthen and extend our present positions in polymer and performance chemicals. In addition, a major continuing effort supports the development of new and improved manufacturing technology for chemical intermediates and various types of polymers.

A corporate research group supports the research efforts of the Company's various businesses. This group includes the Company's Corporate Science and Technology Center, which conducts exploratory research in areas important to the long-term growth of the Company's core businesses, e.g., gas and fluid separations, polymer science, organic synthesis, and fluorine chemicals.

As of November 1, 1998, Air Products owned 938 United States patents and 1630 foreign patents. The Company is also licensed to practice under patents owned by others. While the patents and licenses are considered important, Air Products does not consider its business as a whole to be materially dependent upon any particular patent or patent license, or group of patents or licenses.

#### RAW MATERIALS AND ENERGY

The Company manufactures hydrogen, carbon monoxide, synthesis gas, anhydrous ammonia, carbon dioxide, and methanol principally from natural gas. Such products accounted for approximately 8% of the Company's consolidated sales in fiscal 1998. The Company's principal raw material purchases are chemical intermediates produced by others from basic petrochemical feedstocks such as olefins and aromatic hydrocarbons. These feedstocks are generally derived from various crude oil fractions or from liquids extracted from natural gas. The Company purchases its chemical intermediates from many sources and generally is not dependent on one supplier. However, with respect to vinyl acetate monomer, which supports the polymer business, the Company is heavily dependent on a single supplier, under a long-term contract, which produces vinyl acetate monomer from several facilities. The Company characterizes the availability of these chemical intermediates as generally being readily available. The Company uses such raw materials in the production of emulsions, polyvinyl alcohol, amines, polyurethane intermediates, specialty additives, polyurethane additives and epoxy additives. Such products accounted for approximately 32% of the Company's consolidated sales in fiscal 1998. Natural gas is an energy source at a number of the Company's facilities.

The Company's industrial gas facilities use substantial amounts of electrical power. Any shortage of electrical power or interruption of its supply or increase in its price which cannot be passed through to customers for competitive reasons will adversely affect the merchant industrial gas business of the Company.

In addition, the Company purchases finished and semifinished materials and chemical intermediates from many suppliers. During fiscal 1998, no significant difficulties were encountered in obtaining adequate supplies of energy or raw materials.

#### ENVIRONMENTAL CONTROLS

The Company is subject to various environmental laws and regulations in the United States and foreign countries where it has operations. Compliance with these laws and regulations results in higher capital expenditures and costs. Additionally, 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 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 to the Consolidated Financial Statements included under Item 8 herein.

The amounts charged to earnings on an after-tax basis related to environmental protection totaled \$24 million in 1998, \$26 million in 1997 and \$27 million in 1996. These amounts represent an estimate of expenses for compliance with environmental laws, as well as remedial activities, and costs incurred to meet internal Company standards. Such costs are estimated to be approximately \$27 million in 1999 and \$29 million in 2000.

Although precise amounts are difficult to define, the Company estimates that in fiscal 1998 it spent approximately \$10 million on capital projects to control pollution (including expenditures associated with new plants) versus \$8 million in 1997. Capital expenditures to control pollution in future years are estimated at \$11 million in 1999 and \$7 million in 2000.



The exact amount to be expended by the Company and its power generation business joint ventures on equipment to control pollution will depend upon the timing of the capital projects and timing and content of regulations promulgated by environmental regulatory bodies during the life of any capital investment. Efforts are made to pass these costs through to customers. To the extent long-term contracts have been entered into for supply of product such as for the industrial gas on-site business and for certain chemical products, the cost of any environmental compliance generally is contractually passed through to the customer.

It is the Company's policy to accrue environmental investigatory and noncapital 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 \$11 million to a reasonably possible upper exposure of \$29 million. The balance sheet at 30 September 1998 includes an accrual of \$23 million. At September 30, 1997, the balance sheet accrual was \$33 million, and a receivable balance related to third-party recoveries was \$1 million.

In addition to the environmental exposures discussed in the preceding paragraph, there will be spending at a Company-owned manufacturing site where the Company is undertaking RCRA remediation action. The Company estimates capital costs to implement the anticipated remedial program will range from \$22-\$29 million. Spending was \$6 million through fiscal 1998 and is estimated at \$12 million for fiscal 1999 and \$2 million for 2000. Operating and maintenance expenses associated with continuing the remedial program are estimated to be approximately \$1 million per year beginning in fiscal 1999 and continuing for an estimated period of up to 30 years. A former owner and operator at the site has agreed to reimburse the Company approximately 20% of the costs incurred in the remediation. The cost estimates have not been reduced by the value of such reimbursement, which the Company believes is probable of realization.

Actual costs to be incurred in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures and factors beyond the Company's control such as: lack of knowledge or scarcity of reliable data pertaining to identified sites; method and extent of remediation ultimately required; years of remedial activity required; number of parties involved; final determination of the Company's liability in proportion to that of other parties; identification of new sites; evolving environmental laws and regulations and their application; and advances in technology.

The Company's domestic competitors face similar requirements, which are not shared by most foreign competitors.

#### COMPETITION

The Company's businesses face strong competition from others, some of which are larger and have greater resources than Air Products.

Air Products' industrial gas business competes in the United States with three major sellers and with several regional sellers. Competition in industrial gas markets is based primarily on price, reliability of supply, and furnishing or developing applications for use of such gases by customers and in some cases the provisions of other services or products such as power and steam generation. A similar competitive situation exists in European industrial gas markets in which the Company competes against one or more larger entrenched competitors in most countries.

The number of the Company's principal competitors in the chemicals business varies from product to product, and it is not practical to identify such competitors because of the broad range of the Company's chemical products and the markets served, although the Company believes it has a leading or strong market position in most of its chemical products. For amines, the competition is principally from other large chemical companies that also have the ability to provide competitive pricing, reliability of supply, technical service assistance and quality products and services. The possibility of back integration by large customers is the major competitive factor for the sale of polyurethane intermediates. In its other chemical products, the Company competes with a large number of chemical companies, some of which are larger, possess greater financial resources, and are more vertically integrated than the Company. Competition in these products is principally on the basis of price, quality, product performance, reliability of product supply and technical service assistance.

The Company's equipment and services businesses including power generation compete in all aspects with a great number of firms, some of which have greater financial resources than Air Products. Another important factor in certain export sales is financing provided by governmental entities in the United States and the United Kingdom as compared with financing offered by their counterparts in other countries.

Competition is based primarily on technological performance, service, technical know-how, price and performance guarantees. Air Products believes that its comprehensive project development capability, operating experience, engineering and financing capabilities and construction management experience will enable it to compete effectively.

#### INSURANCE

The Company's policy is to obtain public liability and property insurance coverage that is currently available at what management determines to be a fair and reasonable price. The Company, for itself and its power generation and flue gas treatment joint venture affiliates for which it assumes turnkey construction or operating responsibility, maintains public liability and property insurance coverage at amounts which management believes are sufficient, after retention, to meet the Company's anticipated needs in light of historical experience to cover future litigation and claims. There is no assurance, however, that the Company will not incur losses beyond the limits of, or outside the coverage of, its insurance.

#### EMPLOYEES

On September 30, 1998, the Company (including majority-owned subsidiaries) had approximately 16,700 full-time employees of whom approximately 6,200 were located outside the United States. The Company has collective bargaining agreements with unions at numerous locations, which expire on various dates over the next three years, including an agreement for a facility which manufactures helium and hydrogen containers in Pennsylvania that expires in fiscal 1999. The Company considers relations with its employees to be satisfactory. The Company does not believe that any expiring collective bargaining agreements will result in a material adverse impact on the Company.

#### YEAR 2000

Software failures due to processing efforts potentially arising from calculations using the Year 2000 dates are a known risk. The Company is currently evaluating and managing the financial and operating risks associated with this problem. Additional information regarding the Company's Year 2000 efforts is included under Item 7 herein.

EXECUTIVE OFFICERS OF THE COMPANY

The Company's executive officers, their respective positions and their respective ages on December 15, 1998 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 -----
James H. Agger (D)(E)	62	Senior Vice President, General Counsel and Secretary Retiring effective as of February 1, 1999 (became Senior Vice President in 1997)
W. Douglas Brown (D)(F)	52	Vice President General Counsel and Secretary effective as of February 1, 1999 (became Vice President - Administration, Gases and Equipment in 1997; Senior Vice President - Law and Secretary of American Ref-Fuel Company prior thereto)
Leo J. Daley (D)(E)	52	Vice President - Finance (became Vice President - Finance in 1998; Vice President and Treasurer 1994-1998; Vice President and Corporate Controller prior thereto)
Robert E. Gadomski (D)(E)	51	Executive Vice President--Chemicals, Asia, and Latin America (became Executive Vice President--Chemicals in 1996; Group Vice President--Chemicals Group prior thereto)
John P. Jones III (A)(D)(E)	48	President and Chief Operating Officer (became President and Chief Operating Officer in 1998; Executive Vice President--Gases and Equipment 1996-1998; President -- Air Products Europe, Inc. 1993-1996)
Joseph J. Kaminski (A)(D)(E)	59	Corporate Executive Vice President (became Corporate Executive Vice President in 1996; Executive Vice President--Gases and Equipment 1993-1996)
Ronaldo Sullam (D)(E)	57	President - Air Products Europe, Inc. (became President - Air Products Europe, Inc. in 1996; Senior Vice President --Strategic Marketing, Development and Southern Europe 1995-1996; Vice President -- Marketing and Development Europe and General Manager Southern Europe Division prior thereto)
Harold A. Wagner (A)(B)(C)(D)(E)	63	Chairman of the Board and Chief Executive Officer

- (A) Member, Board of Directors.
- (B) Member, Executive Committee of the Board of Directors.
- (C) Member, Finance Committee of the Board of Directors.
- (D) Member, Management Committee.
- (E) Member, Corporate Executive Committee.
- (F) Chosen to be a Member, Corporate Executive Committee, beginning February 1, 1999.

ITEM 2. PROPERTIES.

The principal executive offices of Air Products are located at its headquarters in Trexlertown, near Allentown, Pennsylvania. Additional administrative offices are located in owned facilities in Hersham, near London, England, and Brampton, near Toronto, Canada, and in leased facilities in the Allentown area, Pennsylvania; Tokyo, Japan; Hong Kong, The People's Republic of China; Singapore and Sao Paulo, Brazil. The management considers the Company's facilities, described in more detail below, to be adequate to support the business efficiently. The following information with respect to properties is as of October 1, 1998.

## INDUSTRIAL GASES

The industrial gases segment has approximately 182 plant facilities in 38 states, the majority of which recover nitrogen, oxygen and argon. The Company has seven facilities which produce specialty gases and 28 facilities which recover hydrogen throughout the United States. Helium is recovered at two plants in Kansas and Texas, and acetylene is manufactured at six plants in six states in the United States. There are 140 sales offices and/or cylinder distribution centers located in 39 states.

The property on which the above plants are located are owned by Air Products at approximately one-fourth of the locations, and leased by Air Products at the remaining locations. However, in virtually all cases, the plant itself is owned and operated by Air Products. Air Products owns approximately half of its sales offices and cylinder distribution centers, including related real estate, and leases the other half.

Air Products' European plant facilities total 60, and include eight plants which recover hydrogen, six plants which manufacture dissolved acetylene, and one which recovers carbon monoxide. The majority of European plants recover nitrogen, oxygen and argon. In addition, there are four specialty gas centers. There is a combined total of 114 sales offices and/or cylinder distribution centers in Europe, and several additional facilities located in Brazil, Canada, Japan, the People's Republic of China, Puerto Rico, Singapore, Indonesia, Taiwan and the Middle East. Representative offices are located in Taiwan and in Beijing and Shanghai in the People's Republic of China.

## CHEMICALS

The chemicals segment manufactures amines, nitric acid, methanol, anhydrous ammonia and ammonia products at its Pace, Florida, facility; alkylamines at its St. Gabriel, Louisiana, facility; polyvinyl acetate emulsions at its South Brunswick, New Jersey, facility; styrene emulsions, styrene acrylics, polyvinyl acetate acrylics, and polyvinyl acetate emulsions at its San Juan del Rio facility in Mexico; nitric acid, dinitrotoluene, toluene diamine, polyvinyl alcohol and acetic acid at its Pasadena, Texas, facility; polyvinyl acetate emulsions, polyvinyl alcohol, acetic acid and acetylenic chemicals at its Calvert City, Kentucky, facility; specialty amines at its Wichita, Kansas, facility; methylamines, dimethyl formamide, choline chloride and dimethyl amino ethanol at its Teeside, England facility; and epoxy additives at its facilities in Manchester, England; Los Angeles, California and Cumberland, Rhode Island. The chemicals segment manufactures polyurethane additives at its Paulsboro, New Jersey, facility which is leased in part and owned in part. The chemicals segment also manufactures polyvinyl acetate emulsions at five smaller locations.

The chemicals segment has 17 plant facilities, five sales offices and one laboratory in the United States and operates three plants, nine sales/representative offices and four laboratories in Europe, laboratories in Brazil, and Korea, one plant in Mexico, two plants in Korea, and sales offices in Australia, Brazil, Mexico, Japan, Korea, Singapore and representative offices in Beijing, Shanghai and Hong Kong in the People's Republic of China. Substantially all of the chemicals segment's plants and real estate thereunder are owned. Approximately 75% of the offices are leased by the Company and 25% are owned.

## EQUIPMENT AND SERVICES

The principal facilities utilized by the equipment and services segment include five plants and two sales offices in the United States, two plants and two offices in Europe, one office in Japan and one plant and one sales office in the People's Republic of China. Air Products owns approximately 50% of the facilities and real estate in this segment and leases the remaining 50%.

## ITEM 3. LEGAL PROCEEDINGS.

In the normal course of business Air Products and its subsidiaries are involved in legal proceedings including proceedings involving governmental authorities. 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 consolidated financial position nor is there any material additional exposure expected in any one year in excess of the amounts the Company currently has accrued. Included in these claims and actions are 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. There are presently approximately 50 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. Additional information on the Company's environmental exposure is included under Environmental Controls on page 6 of this report.

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

Not applicable.

PART II

ITEM 5. MARKET FOR THE COMPANY'S COMMON STOCK AND RELATED STOCKHOLDER MATTERS.

The Company's Common Stock, ticker symbol "APD", is listed on the New York Stock Exchange and Pacific Stock Exchange, respectively. Market and dividend information for the Company's Common Stock appears under "Eleven-Year Summary of Selected Financial Data" on pages 62 and 63 of the 1998 Financial Review Section of the Annual Report to Shareholders which is incorporated herein by reference. In addition, 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 as between series. 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 First Chicago Trust Company of New York, P.O. Box 2506, Jersey City, New Jersey 07303-2506, telephone (800) 519-3111, TDD (201) 222-4955, internet website is [www.fctc.com](http://www.fctc.com), and e-mail address is [fctc@em.fcncbd.com](mailto:fctc@em.fcncbd.com).

As of November 30, 1998, there were 11,673 record holders of the Company's Common Stock.

ITEM 6. SELECTED FINANCIAL DATA.

The tabular information appearing under "Eleven-Year Summary of Selected Financial Data" on pages 62 and 63 of the 1998 Financial Review Section of the 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 22 through 30 of the 1998 Financial Review Section of the Annual Report to Shareholders is incorporated herein by reference.

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

The textual information appearing under "Financial Instruments Sensitivity Analysis" on pages 30 and 31 of the 1998 Financial Review Section of the Annual Report to Shareholders is incorporated herein by reference.

ITEM 8. FINANCIAL STATEMENTS.

The consolidated financial statements and the related notes thereto together with the report thereon of Arthur Andersen LLP dated 30 October 1998, appearing on pages 33 through 61 of the 1998 Financial Review Section of the Annual Report to Shareholders, are incorporated herein by reference.

ITEM 9. DISAGREEMENTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE COMPANY.

The biographical information relating to the Company's directors contained on pages 2 through 6 of the Proxy Statement relating to the Company's 1999 Annual Meeting of Shareholders 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.

ITEM 11. EXECUTIVE COMPENSATION.

The information under "Other Relationships and Transactions", "Remuneration of Directors", "Report of the Management Development and Compensation Committee", "Compensation and Option Tables", "Stock Performance Information", "Pension Plans", and "Certain Agreements with Executive Officers" appearing on pages 7 through 18 of the Proxy Statement relating to the Company's 1999 Annual Meeting of Shareholders is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT.

The information required for this Item is set forth in the section headed "Security Ownership of Certain Beneficial Owners and Management" contained on pages 18 through 20 of the Proxy Statement relating to the Company's 1999 Annual Meeting of Shareholders and such information is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS.

The information under "Other Relationships and Transactions" appearing on page 7 of the Proxy Statement relating to the Company's 1999 Annual Meeting of Shareholders is incorporated herein by reference.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K.

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

1. The 1998 Financial Review Section of the Company's 1998 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 1998 FINANCIAL REVIEW SECTION OF THE ANNUAL REPORT)

Management's Discussion and Analysis.....	22
Report of Independent Public Accountants.....	33
Consolidated Income for the three years ended 30 September 1998.....	34
Consolidated Balance Sheets at 30 September 1998 and 1997.....	35
Consolidated Cash Flows for the three years ended 30 September 1998.....	36
Consolidated Shareholders' Equity for the three years ended 30 September 1998.....	37
Notes to Consolidated Financial Statements.....	38
Business Segment and Geographic Information.....	59
Eleven-Year Summary of Selected Financial Data.....	62

2. The following additional information should be read in conjunction with the financial statements in the Company's 1998 Financial Review Section of the Annual Report to Shareholders:

(PAGE REFERENCES TO THIS REPORT)

Report of Independent Public Accountants on Schedule.....	18
Consent of Independent Public Accountants.....	18

Consolidated Schedule for the years ended 30 September 1998, 1997 and 1996 as follows:

SCHEDULE  
NUMBER  
-----

VIII Valuation and Qualifying Accounts..... 19

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.

EXHIBIT NO.	DESCRIPTION
(3)	Articles of Incorporation and By-Laws.
3.1	By-Laws of the Company. (Filed as Exhibit 3.1 to the Company's Form 8-K Report dated September 18, 1997.)*
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 September 30, 1987.)*
3.3	Amendment to the Restated Certificate of Incorporation of the Company dated January 25, 1996. (Filed as Exhibit 3.3 to the Company's Form 10-K Report for the fiscal year ended September 30, 1996.)*
(4)	Instruments defining the rights of security holders, including indentures. Upon request of the Securities and Exchange Commission, the Company hereby undertakes to furnish copies of the instruments with respect to its long-term debt.
4.1	Rights Agreement, dated as of March 19, 1998, between the Company and First Chicago Trust Company of New York (Filed as Exhibit 1 to the Company's Form 8-A Registration Statement dated March 19, 1998), as amended.*
(10)	Material Contracts.
10.1	1990 Deferred Stock Plan of the Company, as amended and restated effective October 1, 1989. (Filed as Exhibit 10.1 to the Company's Form 10-K Report for the fiscal year ended September 30, 1989.)*
10.2(a)	Long-Term Incentive Plan of the Company, as amended. (Filed as Exhibit 10.2 to the Company's Form 10-K Reports for each of the fiscal years ended September 30, 1986, September 30, 1987 and September 30, 1988.)*
10.2(b)	1990 Long-Term Incentive Plan of the Company. (Filed as Exhibit 10.2(b) to the Company's Form 10-K Report for the fiscal year ended September 30, 1989.)*
10.2(b)(1)	Amendment to 1990 Long-Term Incentive Plan of the Company, effective July 16, 1992. (Filed as Exhibit 10.2(b)(1) to the Company's Form 10-K Report for the fiscal year ended September 30, 1993.)*
10.2(c)	1997 Long-Term Incentive Plan of the Company effective October 1, 1996. (Filed as Exhibit 10.2(c) to the Company's Form 10-K Report for the fiscal year ended September 30, 1996.)*
10.3	1990 Annual Incentive Plan of the Company, as amended and restated effective October 1, 1989. (Filed as Exhibit 10.3 to the Company's Form 10-K Report for the fiscal year ended September 30, 1989.)*
10.3(a)	Amended and Restated 1997 Annual Incentive Plan of the Company effective April 1, 1998.
10.4	Supplementary Pension Plan of the Company, as amended effective October 1, 1988. (Filed as Exhibit 10.4 to the Company's Form 10-K Report for the fiscal year ended September 30, 1989.)*
10.4(a)	Amendment to Supplementary Pension Plan of the Company, adopted September 20, 1995. (Filed as Exhibit 10.4(d) to the Company's Form 10-K Report for the fiscal year ended September 30, 1995.)*

- 10.4(b) Amendment to Supplementary Pension Plan of the Company, adopted September 20, 1995. (Filed as Exhibit 10.4(e) to the Company's Form 10-K Report for the fiscal year ended September 30, 1995.)\*
- 10.4(c) Amendment to Supplementary Pension Plan of the Company, adopted November 2, 1995. (Filed as Exhibit 10.4(c) to the Company's Form 10-K Report for the fiscal year ended September 30, 1996.)\*
- 10.4(d) Amended and Restated Trust Agreement by and between the Company and Provident National Bank relating to the Supplementary Pension Plan dated as of October 31, 1989. (Filed as Exhibit 10.4(a) to the Company's Form 10-K Report for the fiscal year ended September 30, 1989.)\*
- 10.4(e) Amendment to the Amended and Restated Trust Agreement by and between the Company and PNC Bank, N.A.(previously Provident National Bank) relating to the Supplementary Pension Plan dated May 1, 1995. (Filed as Exhibit 10.4(g) to the Company's Form 10-K Report for the fiscal year ended September 30, 1995.)\*
- 10.4(f) Amendment to the Amended and Restated Trust Agreement by and between the Company and PNC Bank, N.A.(previously Provident National Bank) relating to the Supplementary Pension Plan dated May 1, 1997. (Filed as Exhibit 10.4(f) to the Company's Form 10-K Report for the fiscal year ended September 30, 1997.)\*
- 10.5 Supplementary Savings Plan of the Company as amended October 1, 1989. (Filed as Exhibit 10.5 to the Company's Form 10-K Report for the fiscal year ended September 30, 1989.)\*
- 10.5(a) Amendment to Supplementary Savings Plan of the Company effective April 1, 1998.
- 10.5(b) Trust Agreement by and between the Company and Provident National Bank relating to the Supplementary Savings Plan dated as of October 31, 1989. (Filed as Exhibit 10.5(a) to the Company's Form 10-K Report for the fiscal year ended September 30, 1989.)\*
- 10.5(c) Amendment to the Trust Agreement by and between the Company and PNC Bank, N.A.(previously Provident National Bank) relating to the Supplementary Pension Plan dated May 1, 1995. (Filed as Exhibit 10.5(b) to the Company's Form 10-K Report for the fiscal year ended September 30, 1995.)\*
- 10.5(d) Amendment to the Trust Agreement by and between the Company and PNC Bank, N.A. (previously Provident National Bank) relating to the Supplementary Pension Plan and Supplementary Savings Plan dated May 1, 1997. (Filed as Exhibit 10.5(c) to the Company's Form 10-K Report for the fiscal year ended September 30, 1997.)\*
- 10.6(a) Amended and Restated Deferred Compensation Plan for Directors of the Company, effective May 19, 1998.
- 10.6(b) Amended and Restated Pension Plan for Directors of the Company, effective January 1, 1983, as amended effective January 1, 1990 and January 1, 1994. (Filed as Exhibit 10.6(b) to the Company's Form 10-K Report for the fiscal year ended September 30, 1993.)\*
- 10.6(c) Stock Option Plan for Directors of the Company, effective January 27, 1994. (Filed as Exhibit 10.6(c) to the Company's Form 10-K Report for the fiscal year ended September 30, 1997.)\*
- 10.7 Agreements with executives.
- 10.7(a) Form of Employment Agreement dated July 30, 1987, which the Company has with each of its executive officers. (Filed as Exhibit 10.7(a) to the Company's Form 10-K Report for the fiscal year ended September 30, 1987.)\*
- 10.7(b) Letter dated July 1, 1997, concerning pension for an executive officer.



- 10.7(c) Letter dated July 7, 1997, concerning pension for an executive officer.
- 10.8 Employee Severance Plans.
- 10.8(a) Air Products and Chemicals, Inc. Severance Plan effective March 15, 1990. (Filed as Exhibit 10.8(a) to the Company's Form 10-K Report for the fiscal year ended September 30, 1992.)\*
- 10.8(b) Air Products and Chemicals, Inc. Change of Control Severance Plan effective March 15, 1990. (Filed as Exhibit 10.8(b) to the Company's Form 10-K Report for the fiscal year ended September 30, 1992.)\*
- (11) Earnings per share.
- (12) Computation of Ratios of Earnings to Fixed Charges.
- (13) 1998 Financial Review Section of the Annual Report to Shareholders for the fiscal year ended September 30, 1998, which is furnished to the Commission for information only, and not filed except as expressly incorporated by reference in this Report.
- (21) Subsidiaries of the registrant.
- (24) Power of Attorney.
- (27) Financial Data Schedule, which is submitted electronically to the Securities and Exchange Commission for information only, and not filed.
- (27)(b) Reports on Form 8-K filed during the quarter ended September 30, 1998.  
  
Current Reports on Form 8-K dated July 23, 1998, September 21, 1998, October 1, 1998, October 22, 1998, and October 28, 1998, were filed in which Item 5 of such Form was reported.

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

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.

Dated: December 16, 1998

AIR PRODUCTS AND CHEMICALS, INC.  
(Registrant)

By: /s/ Leo J. Daley

-----  
Leo J. Daley, Vice President--Finance  
Principal Financial Officer

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 -----	TITLE -----	DATE -----
/s/ Harold A. Wagner ----- (Harold A. Wagner)	Director and Chairman of the Board (Principal Executive Officer)	December 16, 1998
/s/ Paul E. Huck ----- (Paul E. Huck)	Vice President and Corporate Controller (Principal Accounting Officer)	December 16, 1998
* ----- (John P. Jones III)	Director and President (Principal Operating Officer)	December 16, 1998
* ----- (Joseph J. Kaminski)	Director and Corporate Executive Vice President	December 16, 1998
* ----- (Tom H. Barrett)	Director	December 16, 1998
* ----- (L. Paul Bremer)	Director	December 16, 1998
* ----- (Robert Cizik)	Director	December 16, 1998
* ----- (Ruth M. Davis)	Director	December 16, 1998

SIGNATURE -----	TITLE -----	DATE -----
* ----- (Ursula F. Fairbairn)	Director	December 16, 1998
* ----- (Edward E. Hagenlocker)	Director	December 16, 1998
* ----- (James F. Hardymon)	Director	December 16, 1998
* ----- (Terry R. Lautenbach)	Director	December 16, 1998
* ----- (Rudolphus F. M. Lubbers)	Director	December 16, 1998
* ----- (Takeo Shiina)	Director	December 16, 1998
* ----- (Lawrason D. Thomas)	Director	December 16, 1998

\* James H. Agger, 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/ James H. Agger  
-----  
James H. Agger  
Attorney-in-Fact

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS ON SCHEDULE

To: Air Products and Chemicals, Inc.

We have audited in accordance with generally accepted auditing standards, the consolidated financial statements included in Air Products and Chemicals, Inc.'s Annual Report to Shareholders incorporated by reference in this Form 10-K, and have issued our report thereon dated 30 October 1998. Our audit was made for the purpose of forming an opinion on those statements taken as a whole. The schedule referred to in Item 14(a)(2) in this Form 10-K is the responsibility of the Company's management and is presented for the purposes of complying with the Securities and Exchange Commission's rules and is not part of the basic consolidated financial statements. This schedule has been subjected to the auditing procedures applied in the audit of the basic consolidated financial statements and, in our opinion, fairly states in all material respects the financial data required to be set forth therein in relation to the basic consolidated financial statements taken as a whole.

ARTHUR ANDERSEN LLP

Philadelphia, Pennsylvania  
30 October 1998

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

To: Air Products and Chemicals, Inc.

As independent public accountants, we hereby consent to the incorporation of our reports included or incorporated by reference in this Form 10-K, into the Company's previously filed Registration Statements on Form S-8 and Form S-3 (File Nos. 333-33851, 333-02461, 33-2068, 333-36231, 33-57023, 33-65117, 333-21145, 333-45239, 333-18955, 333-21147 and 333-60147).

ARTHUR ANDERSEN LLP

Philadelphia, Pennsylvania  
11 December 1998

SCHEDULE VIII  
CONSOLIDATED

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES

SCHEDULE VIII--VALUATION AND QUALIFYING ACCOUNTS

FOR THE YEARS ENDED 30 SEPTEMBER 1998, 1997 AND 1996

COLUMN A	COLUMN B	COLUMN C		COLUMN D		COLUMN E
CLASSIFICATION	BALANCE AT BEGINNING OF PERIOD	ADDITIONS		OTHER CHANGES INCREASE (DECREASE)		BALANCE AT END OF PERIOD
		CHARGED TO EXPENSE	CHARGED TO OTHER ACCOUNTS(1)	CUMULATIVE TRANSLATION ADJUSTMENTS	OTHER(2)	
(IN MILLIONS OF DOLLARS)						
Amounts deducted in the consolidated balance sheet from the asset to which it applies:						
YEAR ENDED 30 SEPTEMBER 1998						
Allowance for doubtful accounts	\$ 20 =====	\$ 6 ====	\$ 3 ====	\$ -- =====	\$ (12) =====	\$ 17 =====
YEAR ENDED 30 SEPTEMBER 1997						
Allowance for doubtful accounts	\$ 13 =====	\$ 6 ====	\$ 6 ====	\$ (1) =====	\$ (4) =====	\$ 20 =====
YEAR ENDED 30 SEPTEMBER 1996						
Allowance for doubtful accounts	\$ 14 =====	\$ 5 ====	\$ 1 ====	\$ -- =====	\$ (7) =====	\$ 13 =====

NOTES:

- (1) Includes collections on accounts previously written off and additions applicable to businesses acquired.
- (2) Primarily includes write-offs of uncollectible accounts.

AIR PRODUCTS AND CHEMICALS, INC.  
1997 Annual Incentive Plan  
As Amended and Restated Effective April 1, 1998

1. PURPOSES OF THE PLAN

The purposes of this Plan are to attract, motivate and retain high caliber people and to provide meaningful individual and group incentives within Air Products and Chemicals, Inc. (the "Company") and Participating Subsidiaries.

2. ADMINISTRATION OF THE PLAN

The Plan shall be administered by the Management Development and Compensation Committee (the "Committee") of the Company's Board of Directors or such other committee thereof consisting of such members (not less than three) of the Board of Directors as are appointed from time to time by the Board and who are not eligible and have not been eligible within a period of one year prior to the date of such appointment to receive any award under this Plan.

The Committee shall have all necessary powers to administer and interpret the Plan, such powers to include exclusive authority (within the limitations described in the Plan) to select the employees to whom awards will be granted under the Plan and determine the amount of any award to be made to any employee. In order to assist it in selecting employees and determining the amount of any award to be given to each employee selected, as aforesaid, the Committee may take into consideration recommendations from the appropriate officers of the Company and of each Participating Subsidiary with respect to awards to be given to eligible employees of the Company and of each such Participating Subsidiary, respectively.

The Committee shall have full power and authority to adopt such rules, regulations and instruments for the administration of the Plan and for the conduct of its business as the Committee deems necessary or advisable. The Committee's interpretations of the Plan, and all action taken and determinations made by the Committee pursuant to the powers vested in it hereunder, shall be conclusive and binding on all parties concerned, including the Company, its shareholders and any employee of the Company or any Subsidiary.

3. ELIGIBILITY FOR PARTICIPATION

Participants in the Plan shall be selected by the Committee from among key employees of the Company and Participating Subsidiaries. The term "employee" shall mean any person employed full-time by the Company or a Participating Subsidiary on a salaried basis and the term "employment" shall mean full-time salaried employment by the Company or a Subsidiary. Employees who participate in other incentive or benefit plans of the Company or of any Participating Subsidiary may also participate in this Plan.

1

Awards under the Plan are for services rendered during a Fiscal Year, based on the performance of the Company during that Fiscal Year. No employee shall be eligible to receive an award under the Plan for a particular Fiscal Year unless the employee is in the employment of the Company or a Participating Subsidiary on the last day of that Fiscal Year, provided, however, that an employee whose employment with the Company or a Participating Subsidiary terminates during but before the end of a Fiscal Year on account of (i) Retirement, Disability or death, (ii) in connection with a divestiture of facilities, assets or businesses, elimination of positions, or a reorganization or reduction in the work force of the Company or a Participating Subsidiary, (iii) because of the commencement of part-time employment with or leave of absence from the Company or a Subsidiary, or (iv) on or following a Change in Control, and who at the time of such termination of employment was eligible to participate in the Plan, shall be eligible to receive an award under the Plan for such Fiscal Year.

4. AWARDS

(a) Prior to the end of each Fiscal Year, the Committee shall determine whether awards shall be made under the Plan for that Fiscal Year and, if so, fix the classes of employees eligible to receive awards based upon job grade and salary levels, the proportions of the awards to be paid in cash and in common stock of the Company ("Common Stock"). The Committee shall establish a basis or schedule for determining the total amount of awards and for determining a minimum aggregate dollar amount of awards for employees of the Company and of each domestic Participating Subsidiary designated by the Committee who have elected not to defer such awards that might be granted to them and such other procedures for the making of the awards as the Committee may deem desirable.

(b) The basis (schedule) established under subparagraph (a) for determining the amount of awards may be based on variable factors established by the Committee from time to time, provided that the variables used to determine an amount for a particular Fiscal Year must be capable of being fixed and ascertainable as of the last day of such Fiscal Year. The minimum amount established under subparagraph (a) shall become an accrued liability of the Company on the last day of the Fiscal Year. The amounts of awards to be granted to particular employees of the Company and of the designated domestic Participating Subsidiaries within the eligible classes may be determined after the close of the Fiscal Year under procedures established by the Committee.

(c) The Committee shall, in approving the grant of awards to

particular employees for any Fiscal Year, take into consideration (i) the performance of the Company and of each Participating Subsidiary for the Fiscal Year based upon such measure or measures of performance as the Committee shall select and (ii) as between Participants, the contribution of the Participant during the Calendar Year to the success of the Company or the Participating Subsidiary by which such person is employed, including his or her position and level of responsibility, the achievements of his or her division, group, department or other subdivision, and the recommendations of his or her superiors. No award or awards may be granted to any Participant for the same Fiscal Year having an aggregate value in excess of 150% of such Participant's annualized base salary rate at the end of, or at the time of any earlier cessation of

eligible employment during, the Fiscal Year. The number of shares of Common Stock to be delivered in payment of awards or portions of awards determined to be payable in such form shall be determined by dividing the amount of the award to be so paid by the value of a share of Common Stock determined as provided in paragraph 8(f) as of the date the Committee approves the grant of the award to the Participant.

(d) The Committee shall have complete discretion with respect to the determination of the employees to whom awards shall be made.

(e) Upon final approval by the Committee of awards to particular Participants, awards shall be payable in cash or Common Stock or both and in such amounts and proportions with respect to any Participant as the Committee shall, in its discretion, determine.

(f) Notwithstanding any other provisions of this Plan to the contrary, following or in connection with a Change in Control the Committee may, in its sole discretion, determine to pay awards for the portion of the current Fiscal Year preceding the Change in Control; provided, however, that no such award shall have an aggregate value which exceeds 150% of that Participant's annualized base salary rate immediately prior to the Change in Control. The Committee shall determine in that connection the classes of employees eligible to receive awards based upon job grade and salary levels, the amounts of awards to be made with respect to particular employees within the eligible classes for said partial Fiscal Year, and the proportions of the awards to be paid in cash and in Common Stock and shall undertake such other procedures for the making of the awards as the Committee may deem desirable. Such awards shall be due and payable to Participants within thirty days following the Committee's determination to pay said awards under this paragraph 4(f) or at such earlier date as the Committee shall determine, but in no event earlier than the occurrence of a Change in Control.

#### 5. FORM AND PAYMENT OF AWARDS

(a) Subject to the provisions of this paragraph 5 relating to deferred payment awards, awards for a particular Fiscal Year shall be distributed as soon as feasible in cash or shares of Common Stock or both and, once announced by or for the Committee to the Participant, shall not be subject to forfeiture for any reason, whether or not payable immediately or as a deferred payment award; provided, however, that any award will be paid to the Participant only if the Participant is employed by the Company or a Participating Subsidiary on the last day of the Fiscal Year, except as otherwise permitted by paragraph 3.

(b) At the discretion of the Committee or the election of the Participant as permitted by paragraph 5(c), payment of all or a portion of an award to any Participant may be deferred until termination of employment by the Company or a Subsidiary, under such restrictions and terms as the Committee may establish including those set forth in paragraph 5(d). The deferred payment award may be payable in Common Stock or cash or both as determined by the Committee in its sole discretion. Amounts payable in Common Stock shall be entitled to Dividend Equivalents as provided in paragraph 6. Amounts payable in cash shall accumulate interest at such rate and under such conditions as the Committee shall determine.



(c) Any employee eligible to participate in the Plan may elect prior to the end of the second quarter of any Fiscal Year as to which an award may be granted to such employee, that all or a part of an amount to be awarded to him or her for such Fiscal Year shall be in the form of a deferred payment award. Once an employee elects a deferred payment award for the Fiscal Year, this election will be binding on both the employee and the Company with respect to any award the employee is granted for the Fiscal Year, except that if the amount designated by the Committee under paragraph 4(a) that can be deferred is not sufficient to fund all of the deferrals elected, a pro rata reduction shall be made in each electing Participant's deferred award and any excess shall be paid out currently.

(d) Distribution of a Participant's deferred payment award to the Participant shall, at the election of the Participant, be paid in a single lump sum or substantially equal annual installments commencing in such year following the Participant's termination of employment as is elected by the Participant; provided, however, that no payment shall be made more than ten (10) calendar years after such termination of employment. Distribution will be made or begin as soon as practicable following the end of the calendar year during which the Participant's termination of employment occurs or in January of any subsequent year, in accordance with the Participant's election as to form and time of payout which is effective as of the date of termination or which becomes effective under paragraph 5(e) below prior to the first scheduled payment under the election effective at the time of termination. Deferred payment awards will continue to accumulate Dividend Equivalents or Interest, as provided in paragraph 5(b), until completely distributed.

(e) A Participant shall make an election with respect to form and time of payout of all of his or her deferred payment awards at the time of his or her initial election to defer payment as described in paragraph 5(c) above which shall be effective immediately. While he or she is employed by the Company or a Subsidiary, a Participant may change his or her election in regard to the form and time of commencement of distributions of his or her deferred payment awards, provided that such election is made in a form and manner satisfactory to the appropriate officers of the Company. Such a change in election will become effective on the one-year anniversary of the date it is received by the Company, provided that, in the event of termination prior to the date an election becomes effective, the election shall not become effective if the first scheduled payment under the election in effect at the time of termination is due prior to such one-year anniversary. Notwithstanding the preceding sentence, the initial change in election made by a Participant during fiscal year 1998 and on or after April 1, 1998, if any, shall be effective immediately. A change in election, when effective, shall supersede all prior elections and shall apply to all of the Participant's deferred payment awards, including all prior and future awards until a later election becomes effective.

(f) Deferred payment awards shall be subject to the following further conditions and restrictions:

(i) Awarded but undelivered shares of Common Stock shall be reserved and retained by the Company as treasury stock.

(ii) If a Participant dies prior to receiving his or her entire award, the undelivered portion of any such award shall be paid to his or her Designated Beneficiary or, if none, to his or her legal representative at such times and in such manner as if such Participant were still living (or on such accelerated basis as the Committee may determine).

(iii) The Committee may authorize an acceleration of the delivery date of a portion or all of an undelivered award, related Dividend Equivalents and interest, in the case of a hardship arising from causes beyond the Participant's control; provided that the accelerated payment in such a case must be limited to an amount necessary to meet such hardship. Upon a Change in Control, the delivery date of all deferred payment awards shall be automatically accelerated and said deferred payment awards and related Dividend Equivalents and interest shall be due and payable to Participants immediately.

#### 6. DIVIDENDS

No cash dividends shall be paid on awarded but undelivered shares of Common Stock. However, when such shares of Common Stock are delivered to the Participant, the Company shall Pay to the Participant an amount in cash which shall be equal to the cash dividends, if any, ("Dividend Equivalent") which would have been paid if the shares of Common Stock had been issued and outstanding since the grant of the award. No interest shall be paid on any such Dividend Equivalent or any part thereof.

In the event of a declaration of a dividend payable in Common Stock, the record date for which occurs after the date of the grant of an award but prior to the date of delivery of shares of Common Stock to the Participant, the award shall be increased by such additional number of shares, if any, which would have been delivered if the shares of Common Stock had been issued and outstanding since the grant of the award. For this purpose, shares payable at the delivery date as a result of prior stock dividends shall be treated as awarded stock in determining the increase in shares to be delivered as the result of a current stock dividend.

#### 7. DILUTION AND OTHER ADJUSTMENTS

Notwithstanding any other provision of the Plan, in the event of any change in the outstanding shares of Common Stock of the Company by reason of any stock dividend, split, recapitalization, merger, consolidation, combination or exchange of shares or other similar corporate change including without limitation in connection with a Change in Control, an equitable adjustment shall be made, as determined by the Committee (but subject to the provisions of the first subparagraph of paragraph 9), in (a) the kind of shares subject to the Plan or the maximum number of shares which may be awarded to any one employee, (b) any other aspect or aspects of the plan or outstanding awards granted thereunder as specified by the Committee or (c) any combination of the foregoing. Such adjustment shall be made by the Committee and shall be conclusive and binding for all purposes of the Plan.

## 8. MISCELLANEOUS PROVISIONS

(a) No recipient of an award shall have any rights as a Company shareholder with respect thereto unless and until the date as of which certificates for shares of Common Stock are issued in payment of such award.

(b) A Participant's rights and interests under the Plan may not be assigned or transferred except, in the case of the Participant's death, to his or her Designated Beneficiary or, in the absence of such designation, by will or the laws of descent and distribution.

(c) No shares of Common Stock shall be issued or distributed under the Plan unless and until all legal requirements applicable to the issuance or transfer of such shares have been complied with to the satisfaction of the Committee and the Company.

(d) The Company shall have the right to deduct from awards hereunder paid in whole or in part in cash any federal, state, local or foreign taxes required by law to be withheld with respect to such cash awards. In the case of awards to be paid by the distribution of Common Stock, the Company shall have the right to require, as a condition of such distribution, that the Participant or other person receiving such Common Stock either (i) pay to the Company at the time of distribution thereof the amount of any such taxes which the Company is required to withhold with respect to such Common Stock or (ii) make such other arrangements as the Company may authorize from time to time to provide for such withholding including without limitation having the number of the shares of Common Stock to be distributed reduced by an amount equal in value to the amount of such taxes required to be withheld. The obligation of the Company to make delivery of awards in cash or in Common Stock shall be subject to currency or other restrictions imposed by any government.

(e) No full- or part-time employee of the Company or a Subsidiary or other person shall have any claim or right to be granted an award under this Plan. Neither this Plan nor any action taken hereunder shall be construed as giving any such employee any right to be retained in the employ of the Company or a Subsidiary, it being understood that all Company and Subsidiary employees who have or may receive awards under this Plan are employed at the will of the Company or such Subsidiary and in accord with all statutory provisions.

(f) Distribution of shares of Common Stock in payment of awards under this Plan may be made either from shares of authorized but unissued Common Stock reserved for such purpose by the Board of Directors or from shares of authorized and issued Common Stock reacquired by the Company and held in its treasury, as from time to time determined by the Committee. Such shares shall be valued on any date set forth herein (or, if such date is not expressly set forth herein, on such date or dates as may be determined by the Committee, but not earlier than five trading days prior to the date for which the determination is being made) at the mean of the high and low sales prices on the New York Stock Exchange, as reported on the composite transaction tape, or on such other exchange as the Committee may determine.

(g) The costs and expenses of administering this Plan shall be borne by the Company and not charged to any award nor to any employee or Participant receiving an award. However, the Company may charge the cost of any awards made to employees of Participating Subsidiaries, including administrative costs and expenses related thereto, to the respective Participating Subsidiaries by which such persons are employed.

(h) In addition to terms defined elsewhere herein, the following terms as used in this Plan shall have the following meanings:

"Act" shall mean the Securities Exchange Act of 1934 as amended from time to time.

"Change in Control" shall mean the first to occur of any one of the events described below:

(i) STOCK ACQUISITION. Any "person" (as such term is used in Sections 13(d) and 14(d)(2) of the Act), other than the Company or a corporation, a majority of whose outstanding stock entitled to vote is owned, directly or indirectly, by the Company, or a trustee of an employee benefit plan sponsored solely by the Company and/or such a corporation, is or becomes, other than by purchase from the Company or such a corporation, the "beneficial owner" (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, of securities of the Company representing 20% or more of the combined voting power of the Company's then outstanding voting securities. Such a Change in Control shall be deemed to have occurred on the first to occur of the date securities are first purchased by a tender or exchange offeror, the date on which the Company first learns of acquisition of 20% of such securities, or the later of the effective date of an agreement for the merger, consolidation or other reorganization of the Company or the date of approval thereof by a majority of the Company's shareholders, as the case may be.

(ii) CHANGE IN BOARD. During any period of two consecutive years, individuals who at the beginning of such period were members of the Board of Directors cease for any reason to constitute at least a majority of the Board of Directors, unless the election or nomination for election by the Company's shareholders of each new director was approved by a vote of at least two-thirds of the directors then still in office who were directors at the beginning of the period. Such a Change in Control shall be deemed to have occurred on the date upon which the requisite majority of directors fails to be elected by the shareholders of the Company.

(iii) OTHER EVENTS. Any other event or series of events which, notwithstanding any other provision of this definition, is determined, by a majority of the outside members of the Board of Directors of the Company serving in office at the time such event or events occur, to constitute a Change in Control of the Company for

purposes of this Plan. Such a Change in Control shall be deemed to have occurred on the date of such determination or on such other date as such majority of outside members of the Board shall specify.

"Designated Beneficiary" shall mean the person or persons last designated as such by the Participant on a form filed by him or her with the Committee in accordance with such procedures as the Committee shall approve, provided, however, that in the absence of the filing of such a form with the Company the Designated Beneficiary shall be the person or persons who are the Participant's beneficiary or beneficiaries of the Company's basic life insurance.

"Disability" shall mean permanent and total disability of an employee participating in the Plan as determined by the Committee in accordance with uniform principles consistently applied, upon the basis of such evidence as the Committee deems necessary and desirable.

"Fiscal Year" shall mean the twelve-month period used as the annual accounting period by the Company.

"Participant" shall mean, as to any award granted under this Plan and for so long as such award is outstanding, the employee to whom such award has been granted.

"Participating Subsidiary" shall mean any Subsidiary designated by the Committee to participate in this Plan which Subsidiary requests or accepts, by action of its board of directors or other appropriate authority, such designation.

"Retirement" shall mean separating from service with the Company or a Subsidiary with the right to begin receiving immediate pension benefits under the Company's Pension Plan for Salaried Employees or under another defined benefit pension plan sponsored or otherwise maintained by a Subsidiary for its employees, in either case as then in effect or, in the absence of the Pension Plan or such other pension plan being applicable to any Participant, as determined by the Committee in its sole discretion.

"Subsidiary" shall mean any domestic or foreign corporation, partnership, association, joint stock company, trust or unincorporated organization affiliated with the Company whether or not controlling, controlled by or under common control with the Company.

#### 9. AMENDMENTS AND TERMINATION

The Committee may at any time terminate or from time to time amend or suspend this Plan in whole or in part; provided, however, that no such amendment shall, without the consent of the Participant to whom an award has already been granted hereunder, operate to annul such award.

Unless approved by a vote of a majority of the shares present and entitled to be voted at a meeting of shareholders, no amendment shall be effective to increase the maximum amount

which may be awarded to any individual for the same Fiscal Year, except as otherwise provided in paragraph 7.

#### 10. EFFECTIVE DATE, PAST AMENDMENTS AND TERM OF THE PLAN

This Plan, previously denominated the "Air Products and Chemicals, Inc. 1979 Incentive Compensation Plan", became effective for the Fiscal Year commencing on October 1, 1978 for awards to be made for years to and including Fiscal Year 1983, following approval by a majority of those present at the January 19, 1978 annual meeting of shareholders of the Company and entitled to vote thereon. The Plan was thereafter amended as permitted by its terms effective October 1, 1982 by action of the Board of Directors.

The Plan, as amended effective October 1, 1983, was continued in effect indefinitely until terminated, amended or suspended as permitted under paragraph 9 following approval by the holders of a majority of the outstanding shares of Common Stock of the Company at the January 26, 1984 annual meeting of shareholders of the Company. The Plan was thereafter amended as permitted by its terms effective March 1, 1986, October 1, 1986, July 15, 1987 and October 1, 1989 by action of the Committee. The Plan was renamed the 1990 Annual Incentive Plan and restated effective as of October 1, 1989. The Plan, as set forth herein, was renamed the 1997 Annual Incentive Plan, amended and restated effective as of October 1, 1996.

AMENDMENT TO SUPPLEMENTARY SAVINGS PLAN TEXT  
EFFECTIVE APRIL 1, 1998

"Distribution Event" shall mean an event other than death described under Section 2.17 of the Savings Plan.

"Disability" shall mean permanent and total disability of a Participant as determined by the Committee in accordance with uniform principles consistently applied, upon the basis of such evidence as the Committee (or its designee) deems necessary and desirable.

"Retirement" shall mean termination of employment with the Company or one of its subsidiaries with the right to begin receiving immediate pension benefits under the Company's Pension Plan for Salaried Employees or under another defined benefit pension plan sponsored or otherwise maintained by the Company or a subsidiary for its employees, or, in the absence of such Pension Plan or such other pension plan being applicable to any Participant, as determined by the Committee (or its designee) in its sole discretion;

Section 5.3 Form of Payment and Commencement of Distribution to Participants.  
-----

(a) FORM OF PAYMENT TO PARTICIPANT. Distribution of a Participant's Supplementary Savings Account to the Participant shall be in such of the following forms of payment as the Participant shall elect:

- (1) LUMP SUM. A single lump sum payment.
- (2) INSTALLMENTS. Substantially equal annual installments not to exceed ten (10), commencing in such year following the occurrence of a Distribution Event with

respect to a Participant as is elected by the Participant; provided, however, that no payment shall be made more than ten (10) calendar years after such Distribution Event.

(b) DISTRIBUTION TO A PARTICIPANT. Distribution to a Participant will be made or begin as soon as practicable following the end of the calendar year during which a Distribution Event with respect to a Participant occurs or in January of any subsequent Plan Year, in accordance with the Participant's election as to form and time of payout which is effective as of the date of the Distribution Event or which becomes effective prior to the first scheduled payment under the election effective at the time of the Distribution Event. A Participant's Supplementary Savings Account will continue to be adjusted as provided in Article 4 until it is completely distributed. The amount of any distribution shall be determined based on the value of the Participant's Supplementary Savings Account as of the most recent valuation date which precedes the month in which a distribution is to be made hereunder.

(c) ELECTING AND CHANGING THE FORM OR TIME OF COMMENCEMENT. A Participant shall make an election with respect to form and time of payout of his or her Supplementary Savings Account as described in subsection (a) at the time of his or her initial Deferral Election which shall be immediately effective. While he or she is actively employed by the Company or one of its subsidiaries, a Participant may change his or her election in regard to the form and time of commencement of distributions from his or her Supplementary Savings Account, provided that such election is made in a form and manner satisfactory to the Committee. Such a change in election will be effective on the one-year anniversary of the date it is received by the Benefits Department of the Company's Human Resources division;

provided that, in the event a Distribution Event with respect to such Participant occurs prior to the date an election becomes effective, the election shall not become effective if the first scheduled payment under the election in effect at the time of termination is due prior to such one-year anniversary, Notwithstanding the preceding sentence, the initial change in election made by a Participant during fiscal year 1998 and on or after April 1, 1998, if any, shall be effective immediately. A change in election, when effective, shall supersede all prior elections and shall apply to the Participant's entire Supplementary Savings Account, including all prior and future amounts credited thereto, until a later election becomes effective. In the event no effective or potentially effective election exists as of the January following the occurrence of a Distribution Event, the Participant's entire Supplementary Savings Plan account shall be distributed in a lump sum.



=====

Deferred Compensation Plan  
for Directors\*

=====

## 1. NAME AND PURPOSE

The name of this plan is the Air Products and Chemicals, Inc. Deferred Compensation Plan for Directors (the "Plan"), the purpose of which is to provide

- (a) A vehicle for Air Products and Chemicals, Inc. (the "Company") to compensate persons serving as Directors in the form of Company equity securities to align the interests of a Directors with those of the Company's shareholders ("Mandatory Deferrals"); and
- (b) The opportunity for Directors who so choose to defer compensation earned as a Director or otherwise in connection with his or her services in connection with the business of the Company and its subsidiaries ("Elective Deferrals").

## 2. TERM

The Plan was adopted effective as of 1 January 1980. Section 9 was revised effective as of 25 January 1990. Section 8 and Section 9 were revised effective as of 15 October 1992. Sections 4, 6, 8, and 9 were revised effective as of 19 October 1995. Sections 1, 4, 5, 7, 8, and 9 were amended effective 21 November 1996. Sections 2, 7, 8, 9(a), 9(b), 17, the first paragraph of 9(c), and the Election Form (Exhibit A) were amended effective 19 May 1998.

## 3. PARTICIPANTS

Any Director of the Company who is not an employee of the Company or of a subsidiary of the Company is eligible to participate in the Plan.

## 4. MANDATORY DEFERRALS

There shall be established for each Director who has never been employed by the Company (a "Nonemployee Director"), an account under the Air Products Stock Account described under section 5(b) below to which shall be credited all

\* Adopted 1 January 1980; amended 25 January 1990, 15 October 1992, 19 October 1995, 21 November 1996, and 19 May 1998.

compensation which is to be paid by the Company in the form of deferred stock units credited under the Air Products Stock Account in accordance with the Compensation Program for Directors applicable for calendar year 1997 and later periods (the "Program"); and for each such Nonemployee Director who had not served as a Director for at least six years as of January 1, 1997, the actuarial present value of his or her prorated accrued pension (the "Pension Amount") under the Pension Plan for Directors (the "Pension Plan") in connection with the termination of said Pension Plan.

Dollar amounts to be so credited shall be converted into deferred stock units in the manner described under Section 5(b) below on the quarterly or other specified crediting date for such 1997 and later compensation, and on 21 November 1996, as to the Pension Amount; and using such date(s) as the valuation date(s) for determining Fair Market Value.

## 5. ELECTIVE DEFERRALS

Directors may elect to defer receipt of all or a specified portion of the compensation (exclusive of expense reimbursements) otherwise payable to him or her in cash for serving on the Board of Directors of the Company, attending meetings or committee meetings thereof or performing other services in connection with the business of the Company and its subsidiaries. Such compensation will be credited on the date the compensation is otherwise payable, to one or both of the following hypothetical investment accounts as directed by the Director:

- (a) An account deemed to earn interest at rates established on the first business day of each calendar quarter based upon the published average long-term yields of corporate bonds of "A" rated Industrial Bond Ratings appearing in Moody's Bond Survey or an equivalent Bond Rating Service on such day (the "Interest Account"); and
- (b) An account (the "Air Products Stock Account") deemed to be invested in Air Products and Chemicals, Inc. common stock, par value \$1.00 ("common stock"). The Company shall credit the Air Products Stock Account with that number of units (including fractions) obtained by dividing the amount of such deferred compensation by the Fair Market Value of a share of common stock on the date credited to the Air Products Stock Account (with the units thus calculated herein referred to as "deferred stock units"). For purposes of the Plan, Fair Market Value of a share of common stock on any date (the "valuation date") shall be equal to the mean of the high and low

sale prices on the New York Stock Exchange, as reported on the composite transaction tape, for such date, or, if no sales were quoted on such date, on the most recent preceding date on which sales were quoted.

Nonemployee Directors who had served for six years or more within the meaning of the Pension Plan as of January 1, 1997, may elect to have the actuarial present value of his or her accrued pension benefit under the Pension Plan credited to the Air Products Stock Account on or before December 31, 1996. Such Pension Amount shall be credited and converted to deferred stock units in the manner described in Section 5(b) above, as of the business day the Company's Corporate Secretary's Office receives an Election Form therefor (by mail or fax); and using such date as the valuation date for determining Fair Market Value.

6. EARNINGS ON PLAN ACCOUNTS

Each participant's Plan account will be credited with interest on deferred compensation credited to the Interest Account, and with dividend equivalents on deferred compensation credited to the Air Products Stock Account, as provided below, until the date of payment to the Director (which shall be deemed to be December 31 of the year preceding payment unless payment is made because of death or a Change in Control, in which event the date of payment shall be deemed the date of death or the date of termination of service as a Director following the Change in Control, respectively).

(a) EARNINGS ON INTEREST ACCOUNT. Interest shall be compounded quarterly and earned from the date compensation is credited to the account to the date of payment to the Director.

(b) EARNINGS ON AIR PRODUCTS STOCK ACCOUNT. Earnings shall be credited quarterly in an amount equal to the dividends payable during the quarter just ended with respect to that number of shares of Air Products Stock equal to the number of deferred stock units credited to the Air Products Stock Account during such quarter. The amount so credited shall then be converted into deferred stock units in the manner described under Section 4(b) above using the quarterly crediting date as the valuation date for determining Fair Market Value.

7. TIME AND MANNER OF MAKING ELECTIVE DEFERRALS

An election to defer compensation must be made by a Director prior to the time such compensation is earned. An election shall continue in effect until the end of the participant's service to the Company as a Director and otherwise in connection with its business or until the Company is notified in writing of the revocation or modification of the election, whichever shall occur first.

A participant may elect, modify or revoke a prior election to defer compensation by giving written notice to the Company in a form substantially similar to the Election Form attached hereto as Exhibit A (the "Election Form"). Such Election Form shall specify:

- (a) The amount or percentage of compensation to be deferred beginning on a future date specified in the notice until such notice is revoked or modified as to future compensation (the "Elective Deferred Compensation Amount");
- (b) The percentage of the Elective Deferred Compensation Amount to be credited to the Interest Account and the percentage to be credited to the Air Products Stock Account; and
- (c) The timing of payment, i.e., either a lump-sum payment or a specified number of consecutive annual installment payments (not to exceed ten) of all Elective Deferred Compensation Amounts, and the year in which the lump-sum payment is to be received or the first annual installment payment is to commence.

Any modification or revocation of a prior election described in Section 7(a) or 7(b) above shall relate only to future compensation, and shall not apply to any amounts previously credited to the participant's Plan account.

#### 8. TIMING OF PAYMENT OF MANDATORY DEFERRALS

The amount of each Mandatory Deferral (the "Mandatory Deferred Compensation Amount") will be paid as a lump sum in the first year after the year in which service as a Director ends unless the Director has an Elective Deferral in effect at the time of crediting the Mandatory Deferral, in which case the Director's election as to time of payment of the Elective Deferral will also govern the time of payment of the Mandatory Deferral.

#### 9. PAYMENT OF DEFERRED COMPENSATION

No payment may be made from the participant's Plan account in respect of Elective Deferred Compensation Amounts or Mandatory Deferred Compensation Amounts (together, "Deferred Compensation Amounts") except as provided below.

- (a) **CHANGES IN ELECTION OF TIMING OF PAYMENT.** A participant may change his or her election in regard to the timing of payment of his or her Deferred Compensation Amount as described in Section 7(c) above, by so specifying in an Election Form. Such a change in election of timing of payment will become effective one year from the date the Election Form is received by

the Company unless payments under a prior election commence before such effective date, in which case the new election will expire and the prior election will control the timing of payment of all Deferred Compensation Amounts. Such a change in election of timing of payment, when effective, shall supersede all prior elections and shall apply to all of the participant's prior and future Deferred Compensation Amounts, until a later election becomes effective.

- (b) PAYMENT FOLLOWING TERMINATION OF SERVICE. The value of each Deferred Compensation Amount credited to the Interest Account of a participant's Plan account is payable in cash, and the value of each Deferred Compensation Amount credited to the Air Products Stock Account is payable by delivery of a share of common stock for each deferred stock unit credited to the participant's Plan account, in either case in a lump sum or in annual installments, in accordance with the participant's election.

All payments from Plan accounts must be completed by the tenth year after the year in which service as a Director terminates. All payments will be made in January of the applicable year or as soon thereafter as reasonably possible. If annual installments are to be paid, the amount of the first payment shall be a fraction of the value of the participant's Plan account attributable to the particular Deferred Compensation Amount as of the December 31 preceding payment, the numerator of which is one and the denominator of which is the total number of such installments elected. The amount of each subsequent payment shall be a fraction of the value as of the December 31 preceding each subsequent payment, the numerator of which is one and the denominator of which is the total number of installments elected minus the number of installments previously paid as to such Deferred Compensation Amount. The number of shares of common stock to be delivered in payment from the Air Products Stock Account shall be equal to the number of deferred stock units represented by the payment owed, calculated as aforesaid, rounded up to the next whole share of common stock.

- (c) ACCELERATED PAYMENT. Notwithstanding the deferral period and timing of payment determined in accordance with Sections 9(a) and (b) above, the participant's Plan account shall be paid on an accelerated basis as follows under the circumstances described below (including, under the circumstances described in Section 9(c)(i) or (iii) below, any deferred stock units which may not yet have vested as provided by the applicable Program).

- (i) PAYMENT ON DEATH. In the event of a participant's death, the value of his or her Plan account (including interest and dividend equivalents) determined as of the date of death shall be paid in a single cash lump sum to the participant's estate or designated beneficiary on the earlier of the January 15 or July 15 following such date or as soon thereafter as reasonably possible. The amount of any cash payment in respect of deferred stock units in the Air Products Stock Account shall be determined by multiplying the number of such units, including fractional units, by the Fair Market Value of a share of common stock as of the date of death.
- (ii) CHANGE IN LEGAL CIRCUMSTANCES. In the event of a Change in Legal Circumstance, the Nominating and Corporate Governance Committee of the Board of Directors may, in its sole discretion, authorize the immediate distribution of the Plan account or appropriate modification to the terms of deferral of a participant domiciled outside of the United States. A Change in Legal Circumstances shall be deemed to occur when, due to a change in the laws or regulations of the United States or the country of domicile, the terms of deferral operate as a disincentive to service on the Board or otherwise become inconsistent with the purpose of the Plan.
- (iii) CHANGE IN CONTROL. In the event of a "Change in Control" of the Company followed by a participant's termination of service as a Director of the Company, the value of his or her Plan account (including interest and dividend equivalents) determined as of the date of termination of service as a Director following or in connection with the Change in Control, shall be immediately due and payable to the participant in a single cash lump sum. The amount of any cash payment in respect of deferred stock units in the Air Products Stock Account shall be determined by multiplying the number of such units, including fractional units, by the Fair Market Value of a share of common stock as of such date of termination of service.

The term "Change in Control" shall mean the first to occur of any one of the events described below:

- (x) STOCK ACQUISITION. Any "person" (as such term is used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934 (the "Act")), other than the Company or a corporation, a majority of whose outstanding stock entitled to vote is owned, directly or indirectly, by the Company, or a trustee of an employee benefit plan sponsored solely by the Company and/or

such a corporation, is or becomes, other than by purchase from the Company or such a corporation, the "beneficial owner" (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, of securities of the Company representing 20% or more of the combined voting power of the Company's then outstanding voting securities. Such a Change in Control shall be deemed to have occurred on the first to occur of the date securities are first purchased by a tender or exchange offeror, the date on which the Company first learns of acquisition of 20% of such securities, or the later of the effective date of any agreement for the merger, consolidation or other reorganization of the Company or the date of approval thereof by a majority of the Company shareholders, as the case may be.

- (y) CHANGE IN BOARD. During any period of two consecutive years, individuals who at the beginning of such period were members of the Board of Directors cease for any reason to constitute at least a majority of the Board of Directors, unless the election or nomination for election by the Company's shareholders of each new director was approved by a vote of at least two-thirds of the directors then still in office who were directors at the beginning of the period. Such a Change in Control shall be deemed to have occurred on the date upon which the requisite majority of directors fails to be elected by the shareholders of the Company.
  - (z) OTHER EVENTS. Any other event or series of events which, notwithstanding any other provision of this definition, is determined, by a majority of the outside members of the Board of Directors of the Company serving in office at the time such event or events occur, to constitute a change in control of the Company for purposes of this Plan. Such a Change in Control shall be deemed to have occurred on the date of such determination or on such other date as such majority of outside members of the Board shall specify.
- (d) MISCELLANEOUS PROVISIONS.
- (i) WITHHOLDING OF TAXES. The rights of a participant to payments under this Plan shall be subject to the Company's obligations at any time to withhold income or other taxes from such payments including, without limitation, by reducing the number of shares of common stock to be distributed in payment of deferred stock units by the number of shares equal in value to the amount of such taxes required to be withheld, using the date prior to the date of issuance

of the shares as the valuation date for determining Fair Market Value.

(ii) RIGHTS AS TO COMMON STOCK. No participant with deferred compensation credited to the Air Products Stock Account shall have rights as a Company shareholder with respect thereto unless, and until the date as of which, certificates for shares of common stock are issued upon payment of such deferred compensation. No shares of common stock shall be issued and delivered hereunder unless and until all legal requirements applicable to the issuance, delivery or transfer of such shares have been complied with including, without limitation, compliance with the provisions of the Act and of the Securities Act of 1993, as amended, and the applicable requirements of the exchanges on which the Company's common stock may, at the time, be listed. Distributions of shares of common stock in payment under this Plan may be made either from shares of authorized but unissued common stock reserved for such purpose by the Board of Directors or from shares of authorized and issued common stock reacquired by the Company and held in its treasury, as from time to time determined by, or pursuant to delegations from, the Board of Directors.

(iii) ADJUSTMENTS TO AVOID DILUTION. In the event of any change in the common stock of the Company by reason of any stock dividend or split, recapitalization, merger, consolidation, combination or exchange of shares, or a rights offering to purchase common stock at a price substantially below fair market value, or other similar corporate change, including without limitation in connection with a Change in Control of the Company, the value and attributes of each deferred stock unit shall be appropriately adjusted consistent with such change to the same extent as if such deferred stock units were issued and outstanding shares of common stock of the Company, so as to preserve, without increasing, the value of Plan deferred compensation credited to the Air Products Stock Account. Such adjustments shall be made by the Board of Directors and shall be conclusive and binding for all purposes of the Plan.

#### 10. PARTICIPANT'S RIGHTS UNSECURED

The right of any participant to the payment of deferred compensation and earnings thereon under the Plan shall be an unsecured and unfunded claim against the general assets of the Company.



11. NONASSIGNABILITY

The right of a participant to the payment of deferred compensation and earnings thereon under the Plan shall not be assigned, transferred, pledged or encumbered or be subject in any manner to alienation or anticipation.

12. STATEMENT OF ACCOUNT

Statements will be sent to participants during February as to the value of their Plan accounts as of the end of December of the previous year.

13. ADMINISTRATION

The Administrator of this Plan shall be the Corporate Secretary of the Company. The Administrator shall have authority to adopt rules and regulations for carrying out the Plan and to interpret, construe and implement the provisions thereof.

14. BUSINESS DAYS

If any date specified herein falls on a Saturday, Sunday or legal holiday, such date shall be deemed to refer to the next business day thereafter.

15. AMENDMENT AND TERMINATION

This Plan may at any time be amended, modified or terminated by the Board of Directors of the Company. No amendment, modification or termination shall, without the consent of a participant, adversely affect such participant's rights with respect to amounts theretofore accrued in his or her deferred compensation account.

16. NOTICES

All notices to the Company under this Plan shall be in writing and shall be given as follows:

Corporate Secretary  
Air Products and Chemicals, Inc.  
7201 Hamilton Boulevard  
Allentown, PA 18195-1501

17. GOVERNING LAW

This Plan shall be governed by the laws of the Commonwealth of Pennsylvania and shall be construed for all purposes in accordance with the laws of said state without giving effect to principles of conflicts of laws.

EXHIBIT A  
AIR PRODUCTS AND CHEMICALS, INC. (the "Company")  
DEFERRED COMPENSATION PLAN FOR DIRECTORS (the "Plan")  
Election Form

To: Corporate Secretary  
Air Products and Chemicals, Inc.

I. ELECTIVE DEFERRED COMPENSATION AMOUNT

In accordance with the provisions of the Plan, I hereby (check one):

- Elect (or modify my prior election) to defer receipt of compensation otherwise payable to me in cash for services as a Director of the Company in the manner described below (fill in one):

\$ \_\_\_\_\_ (amount per quarter)

or

\_\_\_\_\_ (percentage per quarter)

- Revoke my election to defer.

This election, modification, or revocation shall take effect beginning on \_\_\_\_\_ to affect only compensation earned on and after such date. (Must be a date after the date this Election Form is received by the Company.)

II. INVESTMENT ACCOUNT FOR ELECTIVE DEFERRED COMPENSATION AMOUNT.

The Elective Deferred Compensation Amount is to be invested in the following Plan account(s) (enter a whole percentage from 1% to 100% in each blank, with the two percentages totaling 100%):

\_\_\_\_\_% in the Interest Account to be paid out in the form of cash.

\_\_\_\_\_% in the Air Products Stock Account to be distributed in the form of Air Products and Chemicals Inc. Common Stock.

Notes concerning compliance with the Federal Securities Law:

- (1) AN ELECTION TO INVEST OR TO CEASE INVESTING, OR TO CHANGE THE LEVEL OF INVESTING, IN THE AIR PRODUCTS STOCK ACCOUNT WILL ONLY BE EFFECTIVE IF RECEIVED BY THE COMPANY DURING A 30-DAY WINDOW PERIOD DURING WHICH THERE IS NO MATERIAL NON-PUBLIC INFORMATION. Such window periods generally occur during the 30-day period commencing one week after the annual report has been mailed to the shareholders, which usually occurs during the first or second week in December, and the 30-day periods starting on the second trading day after the day when quarterly or annual earnings releases have been issued with commentary, which usually occur in the third or fourth weeks of January, April, July, and October. The Corporate Secretary can advise you as to the precise timing of window periods.
- (2) Under current federal securities law, it is necessary to report to the Securities and Exchange Commission the number of units credited to the Air Products Stock Account at the end of each fiscal year, on a Form 5 Report for the year.

EXHIBIT A  
AIR PRODUCTS AND CHEMICALS, INC.  
DEFERRED COMPENSATION PLAN FOR DIRECTORS (the "Plan")  
Election Form

(continued)

III. TIMING OF PAYMENT OF DEFERRED COMPENSATION AMOUNTS (ELECTIVE AND MANDATORY)

COMPLETE A OR B, BUT NOT BOTH

A. Lump Sum Election  
-----

Mandatory Deferred Compensation Amounts and the Elective Deferred Compensation Amount (if any) are to be paid to me in a lump sum (check one):

- In the year my service as a Director ends.
- In the \_\_\_\_ year after the year in which my service as a Director ends (not to exceed tenth).

B. Installment Election  
-----

Mandatory Deferred Compensation Amounts and the Elective Deferred Compensation Amount (if any) are to be paid to me in \_\_\_\_\_ (up to 10) consecutive annual installments, the first of which is to be paid in (check one):

- The year in which my service ends.
- \_\_\_\_ year after the year in which my service ends (the last installment must be paid no later than 10 years after the year in which service ends).

I understand that this payout election, when effective, will apply to all my Deferred Compensation Amounts (Elective and Mandatory) for this and any prior or future year, and will supersede any prior payout election made by me with respect to my Deferred Compensation Amounts.

I understand that this election will become effective one year from the date received by the Company unless payouts under a prior election commence before the effective date; in which case this election will expire and the prior election will control.

Note: Since elections do not take effect for one year, a payment scheduled on or before the first anniversary of the date your service for Air Products ends may prevent a future election made in your last year of service from becoming effective. You should not elect a payment schedule beginning before the second year following termination of your service if you want to preserve maximum flexibility to make future changes in your payment schedule during your last year of service.

This Election Form is received by the Company when received by the Corporate Secretary's Office.

EXHIBIT A  
AIR PRODUCTS AND CHEMICALS, INC.  
DEFERRED COMPENSATION PLAN FOR DIRECTORS (the "Plan")  
Election Form

(continued)

IV. BENEFICIARY DESIGNATION

If I die before receiving all the deferred payments due me under the Plan, I understand the value of my Mandatory and Elective Deferred Compensation Amounts will be paid to my estate or designated beneficiary, in a single lump sum cash payment on the earlier of the January 15 or July 15 following the date of my death or as soon thereafter as reasonably possible. (A beneficiary may be designated by delivering written notice of designation to the Corporate Secretary of the Company.)

=====

This Election is subject to the terms of Air Products and Chemicals, Inc. Deferred Compensation Plan for Directors, as amended from time to time.

Received on the     day of  
on behalf of the Company.

-----  
Signature of Director

By -----  
(Assistant) Corporate Secretary

Date: -----

MEMORANDUM

[AIR PRODUCTS STYLIZED "A" LOGO]

-----

To: R. SULLAM Location: PRESIDENT  
VP HR & PROCUREMENT

From: L V BROESE VAN GROENOU Extension/  
Location: 9901/H3

Date: 01.07.97

Subject: THE MECHANICS OF YOUR PENSION

-----

cc:R. Blamey

Further to our most recent discussions, I am writing to clarify the mechanics of your pension arrangements. As indicated in the correspondence of 09/06/97 your entitlement is based on:

- o 40 years service at the age of 60
- o Using your final year's salary as the base
- o Plus the benefits earned by a special contribution made on your behalf in 1983
- o Less the French points pension
- o In addition you will receive a UK "old age" pension from age 65

As your entitlement is therefore defined and agreed, what remains is to describe the events leading up to your anticipated retirement date:

1. Every year Richard Blamey will inform the insurance company AG what the amount is they need to accrue. In his calculation he will need to check your latest salary as well as the French pension offset. On the basis of this information AG will inform Air Products what contribution is required.
2. In the year leading up to retirement we will assist you in establishing your exact entitlement to French Social Security. In our experience the domicile of the recipient is not an issue.
3. On the retirement date, all the components will be available to determine the sources of your pension. As the total entitlement is "fixed" your only decision will be to determine whether a lump sum or an annuity from the Belgian plan is the optimum solution for you.

If you have further detailed questions, I will make arrangements with Richard Blamey to discuss these with you.

Regards

/S/ L V BROESE VAN GROENOU

L V BROESE VAN GROENOU

Exhibit 10.7(c)

7 July 1997

Mr. W. Douglas Brown  
143 Haversham Drive  
Houston, TX 77024

Dear Mr. Brown:

Air Products and Chemicals, Inc., a Delaware Corporation having its head office at 7201 Hamilton Boulevard, Allentown, PA 18195-1501 (the "Company"), considers a sound and vital management to be essential to protecting and enhancing the best interests of the Company. To confirm the commitment made in order to induce you to accept employment by the Company and to induce you to continue in the employment of the Company, and in consideration of your agreements contained herein and for other good and valuable consideration, this letter agreement (this "Agreement") sets forth the agreement between you and the Company pertaining to a supplemental retirement benefit to which you may be entitled.

#### ARTICLE I BENEFITS

SECTION 1.1 ELIGIBILITY. You have agreed, in consideration of the Company's obligations contained herein, to direct the investment of the basic and rollover portions of the American Ref-Fuel Retirement Savings Plan and the American Ref-Fuel Supplemental Retirement Savings Plan as of 30 June 1997 into an investment that mirrors the rate of return of the S&P 500 Index. Subject to the terms and conditions of this Agreement, you (or, in the case of your death, your surviving spouse) will be entitled to receive a supplemental retirement benefit calculated in accordance with this Article I.

SECTION 1.2 AMOUNT OF SUPPLEMENTAL RETIREMENT BENEFIT. The amount of your supplemental retirement benefit hereunder, if any, will be computed as of the beginning of the month immediately prior to or coincident with the Benefit Payment Date, as defined in Section 1,3 hereof, and shall be equal to (if positive):

(a) the "Assumed Pension", that is, the amount of the benefits you would have received under the qualified defined benefit plan currently known as the Air Products and Chemicals, Inc. Pension Plan for Salaried Employees, as amended from time to time, and the nonqualified defined benefit plan currently known as the Air Products and Chemicals, Inc. Supplementary Pension Plan, as amended from time to time ("Company DB Plans") assuming you had received credited and vesting service under and as defined in the Company DB Plans for your service with American Ref-Fuel Company, with no offset for such service, MINUS

(b) The "Actual Pension", that is, the sum of (i) the actual value of the investment of the basic and rollover portions provided from the American Ref-Fuel plans as described in Section 1. I above, and (ii) the actual amount of the benefits payable to you under the Company DB Plans based upon your actual credited service and pensionable compensation under and as defined or provided in such Plans.

In order to attain equivalency between the various forms and times of receipt of benefits provided for hereunder, the value of the offset described in Section 1.2 (b) (i) above will be annuitized using the provisions for calculating a lump sum in the Air Products and Chemicals, Inc. Pension Plan for Salaried Employees.

SECTION 1.3 TIME AND FORM OF PAYMENT OF SUPPLEMENTAL RETIREMENT BENEFIT. Your supplemental retirement benefit hereunder will be payable on the first day of the month following the later of your age 55 and your separation from service with the Company (your "Benefit Payment Date"). Such benefit will be paid in the form of benefit payment you elect under the Company's Supplementary Pension Plan.

SECTION 1.4 SUPPLEMENTAL PRE-RETIREMENT SPOUSAL BENEFIT. If you die before your Benefit Payment Date, your surviving spouse may be entitled to receive a supplemental pre-retirement survivor benefit calculated as provided in Section 1.2 hereof, substituting in the calculation of the Assumed Pension the amount of the surviving spouse death benefit under the Company DB Plan for the amount of the benefits you would have received under the Company DB Plan, and substituting in the calculation of the Actual Pension the actual amount of the pre-retirement spousal benefits payable under the Company DB Plans. Such benefit will be payable within a reasonable period of time following your death.

#### ARTICLE II MISCELLANEOUS

SECTION 2.1 ADMINISTRATION AND INTERPRETATION. This Agreement will be administered by the Vice President, Human Resources of the Company. The Vice President, Human Resources will have full power and authority to administer the Agreement and interpret the provisions of the Agreement in a manner consistent with the interpretation of similar provisions in the Company DB Plans as the context reasonably permits. The powers of the Vice President, Human Resources include, by way of illustration and not limitation, the discretionary authority

and power to construe and interpret the Agreement, decide all questions of eligibility for benefits, calculate the amount and determine the time, and manner of payment of any benefit and to authorize the payment of a benefit hereunder. The Vice President Human Resources may appoint one or more individuals or committees to assist him in carrying out his duties and responsibilities under the Agreement and may adopt rules and regulations for the administration of the Agreement and alter, amend, or revoke any rules or regulations so adopted. The decisions of the Vice President, Human Resources or his delegates shall be final and binding on the Company, you and your surviving spouse.

SECTION 2.2 CLAIM AND APPEAL PROCEDURES.

(a) CLAIMS PROCEDURES. In the event of a claim for or in respect of any payment under this Agreement or the method of payment thereof, the claimant shall present the reason for his or her claim in writing to the Vice President Human Resources. The Vice President, Human Resources shall, within 90 days after the receipt of such written claim send written notification to the claimant as to its disposition, unless special



circumstances require an extension of time for processing the claim. If such an extension of time for processing is required, written notice of the extension shall be furnished to the claimant prior to the termination of the initial 90-day period. In no event shall such extension exceed a period of 90 days from the end of such initial period. The extension notice shall indicate the special circumstances requiring an extension of time and the date by which the Vice President, Human Resources expects to render the final decision.

In the event the claim is wholly or partially denied, the written notification from the Vice President, Human Resources shall state the specific reason or reasons for the denial, include specific references to pertinent provisions of the Agreement on which the denial is based, provide an explanation of any additional material or information necessary for the claimant to perfect the claim and a statement of why such material or information is necessary, and set forth the procedure by which the claimant may appeal the denial of the claim. If the claim has not been granted and notice is not furnished within the time period specified in the preceding paragraph, the claim shall be deemed denied for the purpose of proceeding to appeal in accordance with paragraph (b) below.

(b) APPEAL PROCEDURES. In the event a claimant wishes to appeal the denial of his or her claim, the claimant may request a review of such denial by making written application to the Vice President, Human Resources within 60 days after receipt of the written notice of denial (or the date on which such claim is deemed denied if written notice is not received within the applicable time period specified in paragraph (a) above). Such claimant (or his or her duly authorized representative) may, upon written request to the Vice President, Human Resources, review documents which are pertinent to such claim, and submit in writing issues and comments in support of his or her position. Within 60 days after receipt of the written appeal (unless an extension of time is necessary due to special circumstances or is agreed to by the parties, but in no event more than 120 days after such receipt), the Vice President, Human Resources shall notify the claimant of his final decision. Such final decision shall be in writing and shall include specific reasons for the decision, written in a manner calculated to be understood by the claimant and specific references to the pertinent provisions of the Agreement on which the decision is based. If such an extension of time for review is required because of special circumstances, written notice of the extension shall be furnished to the claimant prior to the commencement of the extension.

SECTION 2.3 OBLIGATIONS UNFUNDED; ERISA; NONALIENATION OF BENEFITS. The Company's obligations hereunder are unfunded, and the Company shall not be required to segregate any assets in connection therewith, nor be deemed to be a trustee of any amounts to be paid under this Agreement. Any liability to any person with respect to income payable hereunder shall be only a claim against the general assets of the Company at your Benefit Payment Date or the payment date of the supplemental pre-retirement spousal benefit. No such liability shall be deemed to be secured by any pledge or any other encumbrance on any specific property of the Company.

This Agreement is intended to constitute an unfunded, nonqualified plan maintained primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees of the Company and for the exclusions from Title I of the Employee Retirement Income Security Act of 1974, as amended (ERISA) provided for in Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA. In the event that any regulatory or other body or court should determine that the Agreement does not qualify for any such exclusion, then the Company may retroactively revise the Agreement so that it may qualify for the exclusion or take such other action as it deems appropriate, and the Company shall have no liability for benefits under the Agreement prior to such revision or action.

Except as may be required by law, no benefit payable under this Agreement is subject in any manner to anticipation, alienation, sale, transfer, assignment, garnishment, pledge, encumbrance or charge whether voluntary or involuntary, including in respect of any liability of you or your surviving spouse for alimony or other payments for the support of a spouse, former spouse, child or other dependent, prior to actually being received by you or your surviving spouse under the Agreement, and any attempt to anticipate, alienate, sell, transfer, assign, garnish, pledge, encumber or charge the same shall be void. No such benefits will, in any manner, be liable for or subject to your or any other person's debts, contracts, liabilities, engagements or torts. If you or any other person is adjudicated bankrupt, or attempts or purports to anticipate, alienate, sell, transfer, assign, garnish, pledge, encumber or charge any benefit or payment under the Agreement voluntarily or involuntarily, the Vice President, Human Resources, in his sole discretion, will have the authority to cause the same or any other part thereof then payable to be held or applied to or for your or such other person's benefit in such manner and in such proportion as the Vice President, Human Resources shall determine.

SECTION 2.4 PAYMENTS NET OF TAXES. Any payment provided for under this Agreement shall be reduced by any applicable withholding taxes required under federal, state or local law.

SECTION 2.5 NO EMPLOYMENT RIGHTS. Nothing contained in this Agreement will be construed as a contract of employment between you and the Company, or as a right to be continued in the employment of the Company, or as a limitation on the right of the Company to discharge you with or without cause. Specifically, no rights are created hereunder with respect to continued employment.

SECTION 2.6 SUCCESSORS, BINDING AGREEMENT. The Company will require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company, to EXPRESSLY, by written agreement, assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place. As used in this Agreement, "Company" means the Company as hereinabove defined and any successor to its business and/or assets as aforesaid which executes and delivers the agreement provided for in this Section 2.6 or which becomes bound by all the terms and provision of this Agreement by operation of law or otherwise.

This Agreement will inure to the benefit of and be enforceable by your personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees, but neither this Agreement nor any of your rights or obligations hereunder may be assigned or pledged by you or them.

SECTION 2.7 AMENDMENT. No provisions of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing signed by you and such officer as may be specifically designated by the Vice President, Human Resources of the Company; PROVIDED, HOWEVER, that the Vice President, Human Resources will have full power and authority, but will have no obligation, to amend this Agreement without your agreement or consent as provided in Section 2.3 hereof or in order to cure any ambiguity or to conform the provisions hereof and the benefits intended to be provided hereunder to any change in the terms and provisions of any Company DB Plans, or to reflect any change in law, rule or regulation affecting the Company DB Plans or the benefits payable hereunder.

SECTION 2.8 EXCLUSIVE AGREEMENT. No agreement or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not set forth expressly in this Agreement.

SECTION 2.9 OTHER PLANS AND PROGRAMS. Nothing in this Agreement shall prevent or limit your continuing or future participation in any benefit, incentive or other plan or program provided by the Company and for which you may qualify, nor shall anything herein limit or otherwise affect such rights as you may have under any such plan or program.

SECTION 2.10 GOVERNING LAW; VALIDITY. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the Commonwealth of Pennsylvania to the extent such laws are not preempted by ERISA or other applicable Federal laws. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision or provisions of this Agreement, which shall remain in full force and effect.

SECTION 2.11 COUNTERPARTS. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same instrument.

If this letter correctly sets forth our agreement on the subject matter hereof, kindly sign and return to the Company this letter which will then constitute our agreement on this subject.

Sincerely,  
AIR PRODUCTS AND CHEMICALS, INC.

By: /s/ J. P. McAndrew  
-----  
J. P. McAndrew  
Vice President-Human Resources

AGREED THIS 16th DAY  
-----  
OF July 1997  
-----

/s/ W. Douglas Brown  
-----  
W. Douglas Brown

## AIR PRODUCTS AND CHEMICALS, INC., AND SUBSIDIARIES

COMPUTATION OF RATIOS OF EARNINGS TO FIXED CHARGES  
(Unaudited)

	Year Ended 30 September				
	1994	1995	1996	1997	1998
	(Millions of dollars)				
<b>EARNINGS:</b>					
Income before extraordinary item and the cumulative effect of accounting changes	\$233.5	\$368.2	\$416.4	\$429.3	\$546.8
<b>Add (deduct):</b>					
Provision for income taxes	95.2	186.2	195.5	203.4	280.9
Fixed charges, excluding capitalized interest	127.1	148.8	184.0	233.0	202.8
Capitalized interest amortized during the period	8.0	9.1	9.4	8.3	7.4
Undistributed earnings of less-than-fifty-percent-owned affiliates	(2.8)	(25.4)	(40.6)	(31.1)	(25.3)
Earnings, as adjusted	\$461.0	\$686.9	\$764.7	\$842.9	\$1012.6
<b>FIXED CHARGES:</b>					
Interest on indebtedness, including capital lease obligations	\$118.2	\$139.4	\$171.7	\$217.8	\$186.7
Capitalized interest	9.7	18.5	20.0	20.90	18.4
Amortization of debt discount premium and expense	.8	.2	1.5	1.8	1.9
Portion of rents under operating leases representative of the interest factor	8.1	9.2	10.8	13.4	14.2
Fixed charges	\$136.8	\$167.3	\$204.0	\$253.9	\$221.2
<b>RATIO OF EARNINGS TO FIXED CHARGES:</b>	<b>3.4</b>	<b>4.1</b>	<b>3.7</b>	<b>3.3</b>	<b>4.6</b>

Major Factors Affecting Earnings\*

Major factors affecting comparison of earnings per share between 1998 and 1997 were:

-----  
Higher volumes in most product lines

-----  
Broad-based productivity gains

-----  
Favorable equipment segment performance

-----  
Loss of income from divestiture of American Ref-Fuel

-----  
Equity affiliates' income impacted by Asian economy

-----  
Gains on divestiture of American Ref-Fuel, a power contract restructuring, and a project contract settlement

CHANGES IN EARNINGS PER SHARE\*

	1998	1997	Increase
Basic earnings per share	\$2.54	\$1.95	\$ .59
Diluted earnings per share	\$2.48	\$1.91	\$ .57
Less: Special items	.26	.00	.26
	\$2.22	\$1.91	\$ .31

OPERATIONS

Industrial Gases and Chemicals

Volume	\$1.28
Selling price and mix	(.31)
Costs excluding depreciation	(.50)
Depreciation	(.09)
Equipment and Services	.11
Corporate and Other(a)	(.06)
Operating Income	.43
Equity affiliates' income(b)	(.09)
Currency- and exchange-related	(.10)
Tax items	.02
Lower average shares outstanding	.05
Total	\$ .31

(a) Includes 1997 gains on sale of landfill gas and shares in a cost basis investment of \$.05.

(b) Excludes currency- and exchange-related items.

\* See Management's Discussion & Analysis for further information.

## RESULTS OF OPERATIONS

## CONSOLIDATED

(Millions of dollars, except per share)	1998	1997	1996
Sales	\$4,919.0	\$4,637.8	\$4,007.7
Operating income	845.0	725.4	591.3
Equity affiliates' income	38.0	66.3	80.7
Net income	546.8	429.3	416.4
Basic earnings per share	2.54	1.95	1.86
Diluted earnings per share	2.48	1.91	1.83

The results of 1998 and 1996 include the effects of special items. These items should be considered in the comparison of the annual results.

Fiscal 1998 results were increased by net after-tax income of \$58.1 million, or \$.26 per share, for special items. The components of special items on a before- and after-tax basis were: a gain of \$62.6 million (\$35.1 million after-tax, or \$.16 per share) on the sale of substantially all of the company's 50% interest in the American Ref-Fuel Company; a gain of \$28.3 million (\$15.4 million after-tax, or \$.07 per share) from a power contract restructuring related to an American Ref-Fuel project; and a gain of \$12.6 million (\$7.6 million after-tax, or \$.03 per share) from a cogeneration project contract settlement. Additional details of the divestiture of the American Ref-Fuel Company are included in Note 17 to the consolidated financial statements.

TWO GRAPHS APPEAR HERE SIDE-BY-SIDE INDICATING SALES (IN BILLIONS OF DOLLARS) AND OPERATING INCOME (IN MILLIONS OF DOLLARS), RESPECTIVELY FOR FISCAL YEARS 94, 95, 96, 97 AND 98.

Fiscal 1996 results included a \$66.8 million gain (\$40.7 million after-tax, or \$.18 per share) from the settlement with Bankers Trust Company over losses reported in fiscal 1994 associated with leveraged interest rate swap contracts.

The following table presents the results for 1998, 1997, and 1996 exclusive of special items. The discussion of the consolidated and segment results is based on income excluding special items. A description of the products and services and markets for each of the three business segments is included in Note 20 to the consolidated financial statements.

## EXCLUSIVE OF SPECIAL ITEMS

(Millions of dollars, except per share)	1998	1997	1996
Sales	\$4,919.0	\$4,637.8	\$4,007.7
Operating income	845.0	725.4	591.3
Equity affiliates' income	38.0	66.3	80.7
Net income	488.7	429.3	375.7
Basic earnings per share	2.28	1.95	1.68
Diluted earnings per share	2.22	1.91	1.65

The company achieved record sales, net income and diluted earnings per share in fiscal 1998. Sales of \$4,919.0 million in fiscal 1998 were 6% above the \$4,637.8 million reported in fiscal 1997. Operating income of \$845.0 million was up \$119.6 million, a 16% increase. Equity affiliates' income declined to \$38.0 million from \$66.3 million in 1997. The resulting diluted earnings per share were \$2.22, a \$.31 increase, or 16%. The record diluted earnings per share were obtained in spite of an unfavorable year-to-year currency and exchange impact of \$.10. The results also overcame a \$.06 per share impact from the loss of earnings of the divested American Ref-Fuel business.

Total sales increased 6%, net of a 1% unfavorable currency impact. Sales growth in the industrial gases and chemicals segments was due to broad-based volume growth that was tempered by pricing pressure. Sales in the equipment and

services segment declined slightly from fiscal 1997. Volume growth coupled with continuing productivity gains and a favorable product mix in the equipment business produced a 16% improvement in operating income. Equity affiliates' income declined primarily due to the divestiture of the American Ref-Fuel Company and the unfavorable business environment in Asia.

Fiscal 1997 sales of \$4,637.8 million were 16% above the fiscal 1996 level of \$4,007.7 million. Year-to-year operating income grew \$134.1 million, or 23%, to \$725.4 million. Equity affiliates' income declined \$14.4 million to \$66.3 million. Net income of \$429.3 million rose \$53.6 million, a 14% increase. Diluted earnings per share of \$1.91 were 16%, or \$.26, better than fiscal 1996. The diluted earnings per share growth was obtained in spite of an unfavorable year-to-year currency and exchange impact of \$.09.

In October 1996, the company increased ownership in Carbueros Metalicos S.A. (Carbueros) from 47.6% to 96.7%. As a result of this increase in ownership, Carbueros was included in the consolidated results for all but the first seven weeks of fiscal 1997. Previously, the company accounted for its investment using the equity method. See Note 17 to the consolidated financial statements.

Sales and operating income increased primarily due to higher volumes in most businesses and the inclusion of Carbueros in the industrial gases segment for most of fiscal 1997. Broad-based productivity gains also contributed to the operating income growth. Equity affiliates' income demonstrated strong operating results in power generation, which were offset by the movement of Carbueros to consolidated results and lower income from Asian affiliates.

#### SEGMENT ANALYSIS

A description of the products and services and markets for each of the three business segments is included in Note 20 to the consolidated financial statements.

#### INDUSTRIAL GASES

(Millions of dollars)	1998	1997	1996
Sales	\$2,907.5	\$2,673.9	\$2,310.5
Operating income	573.1	515.2	406.7
Equity affiliates' income	17.3	28.5	44.0

Sales of \$2,907.5 million in fiscal 1998 increased 9%, or \$233.6 million from fiscal 1997 reported sales. Unfavorable currency impacts reduced year-to-year growth by 2%.

Merchant gases volumes grew 7% in both the United States and Europe. The volume growth impact on sales was tempered by lower pricing for merchant products in the United States and Europe of 3% and 2%, respectively. Tonnage gases volume increased 18% in Europe, driven by loading of new facilities serving the chemicals process industry. Domestic tonnage gases were essentially flat year-to-year. Asset management efforts and continuing productivity gains combined with the favorable volume growth to increase both total operating income and the operating margin. Operating income of \$573.1 million was up \$57.9 million, or 11%. The operating margin increased from 19.3% in fiscal 1997 to 19.7% in fiscal 1998.

Equity affiliates' income of \$17.3 million is down \$11.2 million, primarily due to unfavorable business conditions in Asia. Total currency and exchange effects reduced equity affiliates' income by approximately \$10.5 million in fiscal 1998.

Sales during fiscal 1997 increased 16% to \$2,673.9 million, while operating income of \$515.2 million was up \$108.5 million, or 27%, over fiscal 1996. Currency and exchange effects reduced sales and operating income growth by approximately 2%.

The consolidation of Carbueros, a leading supplier of industrial gases in Spain, contributed approximately two-thirds of the sales growth and approximately half of the operating income improvement for this segment in fiscal 1997. Previously, the company accounted for its investment using the equity method.

Merchant gases volumes in both the domestic and European regions were 5% above the prior year. Merchant gases pricing was flat in both regions year-on-year. Worldwide tonnage gases grew 8% as a direct result of continued loading of recent investments, particularly the HYCO facilities. Additionally, higher operating income was driven by productivity gains in the domestic gases business. Worldwide gases margins improved from 17.6% to 19.3% in fiscal 1997.

Equity affiliates' income for fiscal 1997 decreased \$15.5 million from the prior year to \$28.5 million. This decline was due to the movement of Carbueros into consolidated results, higher infrastructure costs attributed to worldwide expansion, and economic turmoil in Southeast Asia resulting in weak Asian currencies and a customer bankruptcy.



## CHEMICALS

(Millions of dollars)	1998	1997	1996
Sales	\$1,539.2	\$1,448.1	\$1,362.3
Operating income	253.7	204.2	197.5
Equity affiliates' income	.6	.4	.3

Sales in 1998 increased 6%, or \$91.1 million, to \$1,539.2 million. Operating income increased 24%, or \$49.5 million, to \$253.7 million. The prior-year results included a \$9.3 million asset impairment loss in the release agents business (sold in the second quarter of fiscal 1997). Excluding this loss, operating income in fiscal 1998 increased \$40.2 million, or 19%. The sales increase is due primarily to volume gains in most businesses, with overall volumes up 10%. Growth in amines led the overall volume growth due to strong base customer demand and the impact of the Imperial Chemicals Industries (ICI) methyl and higher amines acquisitions. The volume growth was tempered by lower polyvinyl alcohol margins and lower methanol and ammonia product prices and margins. Operating income was also favorably impacted by continuing productivity gains. Currency and exchange effects reduced sales growth by 1% and operating income growth by 3% in fiscal 1998. Operating margin in fiscal 1998 was 16.5%, compared with 14.1% in fiscal 1997.

Sales in 1997 increased \$85.8 million to \$1,448.1 million, while operating income increased \$6.7 million to \$204.2 million. Excluding a \$9.3 million asset impairment loss in the release agents business (sold in the second quarter of fiscal 1997), operating income rose 8% to \$213.5 million. Sales and operating income increased on broad-based volume gains in most businesses, with overall volumes up 5%. Productivity gains also favorably impacted the year's results. Currency and exchange effects reduced sales growth by 1% and operating income growth by 5% in fiscal 1997.

## EQUIPMENT AND SERVICES

(Millions of dollars)	1998	1997	1996
Sales	\$472.3	\$514.6	\$314.6
Operating income	73.1	37.5	32.7
Equity affiliates' income	17.7	13.9	8.5

Sales of \$472.3 million decreased \$42.3 million from the prior year, primarily due to lower project activity in the company's gas separation business. Operating income increased \$35.6 million to \$73.1 million. The increase in operating income is a result of improved project cost performance and a more profitable project mix, including higher natural gas liquefaction equipment sales. Sales backlog for the equipment product line declined slightly to \$302 million at 30 September 1998, compared with \$310 million at 30 September 1997. It is expected \$249 million of the backlog will be completed during fiscal 1999. The current-year backlog is more heavily weighted toward air separation equipment.

Equity affiliates' income increased \$3.8 million to \$17.7 million in fiscal 1998, due to favorable performance and lower overheads in the power generation business.

Fiscal 1997 sales of \$514.6 million increased \$200.0 million over the prior year on higher activity in most product lines. Operating income increased \$4.8 million to \$37.5 million, due to higher sales.

Equity affiliates' income increased \$5.4 million to \$13.9 million in fiscal 1997, due to improved operations driven by lower development spending and higher power rates in the power generation business.

## CORPORATE AND OTHER

This segment includes several components: unallocated corporate income (expense) and foreign exchange gains (losses), the American Ref-Fuel business sold in December 1997, and the landfill gas business sold in November of 1996.

In December 1997, the company sold substantially all of its 50% interest in the American Ref-Fuel Company, its former waste-to-energy joint venture with Browning-Ferris Industries, Inc., to a limited liability company formed by Duke Energy Power Services and United American Energy Corporation. Duke Energy Capital Corporation, the parent company of Duke Energy Power Services, assumed the various parental support agreements.

(Millions of dollars)	1998	1997	1996
-----------------------	------	------	------

-----			
Sales	\$--	\$1.2	\$20.3
-----			
Operating loss	(54.9)	(31.5)	(45.6)
-----			
Equity affiliates' income	2.4	23.5	27.9
-----			

Sales declined in the current year as a result of the sale of the landfill gas recovery business in early fiscal 1997.

Net operating loss increased \$23.4 million in the current year. The prior-year results included a gain of \$9.5 million on the sale of the landfill gas recovery business and a gain of \$7.3 million on the partial sale of the cost basis Daido Hoxan investment. Excluding these nonrecurring items, operating expenses were up \$6.6 million, due primarily to higher foreign exchange losses in the current year.

Equity affiliates' income of \$2.4 million was down \$21.1 million from the prior fiscal year, primarily due to the sale of substantially all of the American Ref-Fuel Company in December 1997.

Sales were down \$19.1 million to \$1.2 million in fiscal 1997, due to the sale of the landfill gas recovery business in November 1996. The operating loss was down \$14.1 million from the prior year. Fiscal 1997 results included a gain of \$9.5 million on the landfill gas business sale and a gain of \$7.3 million on the partial sale of the cost basis Daido Hoxan investment. Excluding these items, the operating loss increased \$2.7 million, due to foreign exchange losses offset partially by lower operating losses from the divested landfill gas recovery business.

Equity affiliates' income of \$23.5 million was down \$4.4 million from the prior fiscal year. During fiscal 1997, American Ref-Fuel of Hempstead refinanced its debt, which resulted in a \$4.8 million reduction in equity affiliates' income. Excluding the refinancing cost, equity affiliates' income for fiscal 1997 was comparable to the prior year.

#### SETTLEMENT ON LEVERAGED INTEREST RATE SWAPS

In January 1996, the company reached a settlement with Bankers Trust Company over the \$107.7 million of losses reported in 1994 associated with leveraged interest rate swap contracts. The \$66.8 million settlement gain (\$40.7 million after tax, or \$.18 per share) was affected, in part, by the termination of obligations stemming from two previously closed contracts. Prior to the settlement, there was an outstanding liability of \$61.7 million associated with the closed contracts.

#### INTEREST EXPENSE

(Millions of dollars)	1998	1997	1996
Interest incurred	\$178.5	\$180.4	\$144.7
Less: Interest capitalized	15.7	19.1	15.5
Interest expense	\$162.8	\$161.3	\$129.2

Fiscal 1998 interest expense increased a nominal \$1.5 million over the prior year. A lower level of capitalized interest was partially offset by a slightly lower interest rate. Average debt outstanding in fiscal 1998 was essentially the same as the prior year. In fiscal 1997, interest expense rose \$32.1 million, due to higher average debt balances driven by the overall capital expenditure program, the Carbueros acquisition, and the share repurchase program.

#### INCOME TAXES

	1998	1997	1996
Effective tax rate	33.6%	31.9%	31.7%

The effective tax rate increased from 31.9% in fiscal 1997 to 33.6% in fiscal 1998. Exclusive of the higher tax rate on the American Ref-Fuel Company sale and the two power contract gains, the fiscal 1998 rate was 32.2%, or .3% over fiscal 1997.

The effective tax rate in fiscal 1997 was 31.9% versus 31.7% in fiscal 1996. The fiscal 1996 rate was 30.8%, exclusive of the Bankers Trust settlement. The higher rate in fiscal 1997 was due to lower after-tax equity affiliates' income.

#### ENVIRONMENTAL MATTERS

The company is subject to various environmental laws and regulations in the United States and foreign countries where it has operations. Compliance with these laws and regulations results in higher capital expenditures and costs. Additionally, 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 designation of certain sites for investigation and possible cleanup. The company's accounting policies for environmental expenditures are discussed in Note 1 to the consolidated financial statements.



The amounts charged to earnings on an after-tax basis related to environmental protection totaled \$23.5 million, \$25.7 million, and \$27.1 million for 1998, 1997, and 1996, respectively. These amounts represent an estimate of expenses for compliance with environmental laws, as well as remedial activities, and costs incurred to meet internal company standards. Such costs are estimated to be approximately \$27 million in 1999 and \$29 million in 2000.

Although precise amounts are difficult to define, the company estimates that in fiscal 1998 it spent approximately \$10 million on capital projects to control pollution (including expenditures associated with new plants) versus \$8 million in 1997. Capital expenditures to control pollution in future years are estimated at \$11 million in 1999 and \$7 million in 2000.

It is the company's policy to accrue environmental investigatory and noncapital 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 \$11 million to a reasonably possible upper exposure of \$29 million. The balance sheet at 30 September 1998 included an accrual of \$23.4 million. At 30 September 1997, the balance sheet accrual was \$33.3 million, and a receivable balance related to third-party recoveries was \$0.5 million.

In addition to the environmental exposures discussed in the preceding paragraph, there will be spending at a company-owned manufacturing site where the company is undertaking RCRA corrective action remediation. The company estimates capital costs to implement the anticipated remedial program will range from \$22-\$29 million. Spending was \$5.5 million through fiscal 1998 and is estimated at \$12 million for fiscal 1999 and \$2 million for fiscal 2000. Operating and maintenance expenses associated with continuing the remedial program were minimal in fiscal 1998 and are estimated at \$1 million a year beginning in fiscal 1999 and will continue for an estimated period of up to 30 years. A former owner and operator at the site has agreed to reimburse the company 20% of the costs incurred in the remediation. Reimbursement of \$0.4 million was received in fiscal 1998 and is estimated at \$3 million for fiscal 1999 and \$1 million for fiscal 2000. The cost estimates have not been reduced by the value of such reimbursement.

Actual costs to be incurred at identified sites in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures. Subject to the imprecision in estimating future environmental costs, 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.

#### LIQUIDITY, CAPITAL RESOURCES, AND OTHER FINANCIAL DATA

Air Products maintained its sound financial condition throughout fiscal 1998. Strong cash flow from operations and proceeds from asset sales, supplemented with proceeds from debt financings, provided funding for the company's capital spending and share repurchase programs. Cash flow from operations and financing activities will meet liquidity needs for the foreseeable future. The company's senior debt and commercial paper continue to be rated A/A2 and A-1/P-1, respectively.

Cash Flow Graph

Total Capital Graph

## CAPITAL EXPENDITURES

Capital expenditures in fiscal 1998 totaled \$1,000.7 million, an 18% reduction from the fiscal 1997 level. Additions to plant and equipment were largely in support of worldwide expansion of the industrial gas business. Acquisitions in fiscal 1998 included \$108.4 million for the ICI methylamines and derivatives businesses in the Chemicals Group. Acquisitions in fiscal 1997 included \$288.4 million for the third stage of the acquisition of Carbueros Metalicos. Investments in unconsolidated affiliates in fiscal 1996 included an equity investment of \$120.0 million in Carbueros, the second stage of the acquisition process.

(Millions of dollars)	1998	1997	1996
-----	-----	-----	-----
Additions to plant and equipment	\$ 770.9	\$ 870.2	\$ 951.3
-----	-----	-----	-----
Investments in and advances to			
unconsolidated affiliates	31.9	47.2	197.2
-----	-----	-----	-----
Acquisitions	192.2	301.2	11.6
-----	-----	-----	-----
Capital leases	5.7	3.0	4.7
-----	-----	-----	-----
Total	\$1,000.7	\$1,221.6	\$1,164.8
-----	-----	-----	-----

Capital expenditures are expected to be approximately \$1.0 billion in fiscal 1999. It is anticipated these expenditures will be funded with cash from operations supplemented with proceeds from financing activities.

## FINANCING AND CAPITAL STRUCTURE

Capital needs in fiscal 1998 were satisfied with cash from operations, proceeds from asset sales, including \$62.6 million from the sale of substantially all of the company's 50% interest in the American Ref-Fuel Company, and additional borrowings. At year end, total debt as a percentage of debt plus equity was 50% as compared to 48% at the end of fiscal 1997.

Financing activities during fiscal 1998, principally in the United States, included the public issuance of \$50.0 million of notes with a twelve-year maturity and coupon rate of 6.24%. Additionally, the company issued \$50.0 million of notes due in 2016 with a one-time put option, exercisable by the investor after three and one-half years. The coupon on these notes is indexed to LIBOR to the put date.

At year end, \$320.7 million of commercial paper was outstanding compared to \$135.0 million at the end of fiscal 1997.

Substantial credit facilities are maintained to provide backup funding for commercial paper and to ensure availability of adequate resources for corporate liquidity. At 30 September 1998, the company's revolving credit commitments amounted to \$600.0 million, with funding available in 13 currencies. No borrowings were outstanding under these commitments at the end of fiscal 1998. Additional commitments totaling \$104.2 million are maintained by the company's foreign subsidiaries, of which \$19.5 million was utilized at year end.

At 30 September 1998, the company had unutilized shelf registrations for \$325.0 million of debt securities.

During fiscal 1998, the company purchased 9.4 million shares (post-split basis) of its outstanding shares at a cost of \$365.0 million, completing the previously announced \$600.0 million program. Purchases during fiscal 1997 totaled 1.9 million shares at a cost of \$135.0 million.

## SUBSEQUENT EVENTS

On 1 October 1998, the company and Wacker-Chemie GmbH (Munich, Germany) formed two joint ventures to combine their emulsions and redispersible powder businesses. Additional details on these transactions are included in Note 18 to the consolidated financial statements.

In October 1998, the company's Board of Directors authorized an Air Products stock repurchase plan of up to 25 million shares. The company expects to purchase between \$100 and \$200 million of Air Products shares in fiscal 1999.

## FINANCIAL INSTRUMENTS

The company enters into contractual agreements in the ordinary course of business to hedge its exposure to interest rate and foreign currency risks. Counterparties to these agreements are major financial institutions. Management believes the risk of incurring losses related to credit risk is remote and any losses would be immaterial.

Interest rate swap agreements are used to reduce interest rate risks and costs inherent in the company's debt portfolio. The company enters into these agreements to change the fixed/variable interest rate mix of the debt portfolio in order to maintain the percentage of fixed and variable debt within certain parameters set by management. Accordingly, the company enters into agreements to both effectively convert variable-rate debt to fixed-rate debt and to effectively convert its fixed-rate debt into variable-rate debt which is principally indexed to LIBOR rates. The company has also entered into interest rate swap contracts to effectively convert the stated variable rates to interest rates based on LIBOR.

The company is also party to interest rate and currency swap contracts. These contracts entail both the exchange of fixed- and floating-rate interest payments periodically over the life of the agreement and the exchange of one currency for another at inception and a specified future date. These contracts effectively convert the currency denomination of a debt instrument into another currency in which the company has a net equity position while changing the interest rate characteristics of the instrument. The contracts are used to hedge intercompany lending activities and the value of investments in certain foreign subsidiaries and affiliates.

The company, in management of its exposure to fluctuations in foreign currency exchange rates, has entered into a variety of foreign exchange contracts, including forward, option combination, and purchased option contracts. These agreements generally involve the exchange of one currency for a second currency at some future date. The company enters into forward exchange and option combination contracts to reduce the exposure to foreign currency fluctuations associated with certain monetary assets and liabilities, as well as certain firm commitments and highly anticipated cash flows. Forward exchange contracts are also used to hedge the value of investments in certain foreign subsidiaries and affiliates by creating a liability in a currency in which the company has a net equity position. The company is also party to purchased option contracts which, if exercised, involve the sale or purchase of foreign currency at a fixed exchange rate for a specified period of time. These contracts are used to hedge firm commitments and certain highly anticipated cash flows, including export sales transactions.

Additional details on these and other financial instruments are set forth in Notes 3, 5, and 6 to the consolidated financial statements and in the Financial Instrument Sensitivity Analysis.

#### WORKING CAPITAL

Working capital (excluding cash and cash items, short-term borrowings, and current portion of long-term debt) was \$737.8 million, up \$114.2 million over the \$623.6 million at the end of fiscal 1997. The increase is driven by a \$70.9 million lower accounts payable and a \$42.1 million increase in inventories that includes the impact of small acquisitions.

Working capital at the end of fiscal 1997 was \$623.6 million, up \$134.8 million over the \$488.8 million at the end of fiscal 1996. Excluding the impact of the Carbueros consolidation, working capital increased \$81.6 million, due mainly to an increase in trade receivables on higher fiscal 1997 sales.

#### DIVIDENDS AND STOCK SPLIT

In May 1998, the Board of Directors approved a two-for-one stock split. The additional shares were issued on 15 June 1998 to shareholders of record on 15 May 1998.

The Board of Directors in May 1998 also increased the quarterly cash dividend 13%, from 15.0 cents per share to 17.0 cents per share on a post-split basis. Dividends are declared by the Board of Directors and, when declared, usually will be paid during the sixth week after the close of the fiscal quarter.

#### SHAREHOLDER RIGHTS PLAN

In March 1998, the company's Board of Directors approved a stockholder rights plan to replace the previous plan, adopted in 1988, which expired in March 1998. See Note 9 to the consolidated financial statements.

#### NEW ACCOUNTING STANDARDS

In June 1997, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 130, "Reporting Comprehensive Income." The standard establishes additional disclosure for the elements of comprehensive income and a total comprehensive income calculation. The company will adopt this standard in the first quarter of fiscal 1999.

Also in June 1997, the FASB issued SFAS No. 131, "Disclosure about Segments of an Enterprise and Related Information." This standard defines the disclosure requirements for operating segments. Operating segments are defined as components of an enterprise for which separate financial information is available that is evaluated regularly by the chief operating decision maker. The company will adopt the standard for the fiscal year ending 30 September 1999, with interim reporting beginning in the first quarter of fiscal 2000.

In June 1998, the FASB issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." The Statement establishes accounting and reporting standards requiring that every derivative instrument (including certain derivative instruments embedded in other contracts) be recorded in the balance sheet as either an asset or a liability measured at its fair value. The Statement requires that



changes in the derivative's fair value be recognized currently in earnings unless specific hedge accounting criteria are met. Special accounting for qualifying hedges allows a derivative's gains and losses to offset related results on the hedged item in the income statement and requires that a company must formally document, designate, and assess the effectiveness of transactions that receive hedge accounting.

This Statement is effective for fiscal years beginning after 15 June 1999, and it may be implemented as of the beginning of any fiscal quarter after 15 June 1998. The Statement must be applied to (a) derivative instruments and (b) certain derivative instruments embedded in contracts that were issued, acquired, or substantially modified after 31 December 1997 (and, at the company's election, before 1 January 1998). The transition adjustments resulting from adopting this statement shall be reported in net income or other comprehensive income, as appropriate, as the effect of a change in accounting principle and presented in a manner similar to the cumulative effect of a change in accounting principle.

The company has not yet quantified the impacts of adopting this Statement on the financial statements or the risk management processes. Additionally, the company expects to adopt this standard in the first quarter of fiscal 2000.

In March 1998, the American Institute of Certified Public Accountants issued Statement of Position No. 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use" (SOP 98-1). SOP 98-1 requires that software developed or obtained for internal use and meeting certain specific criteria be capitalized. The company will adopt this SOP for fiscal 1999 and does not expect a material impact on results from the adoption of the SOP.

#### PENSION PLAN FUNDING

The funding policy for pension plans is to accumulate plan assets that, over the long run, will approximate the present value of projected benefits payable. In fiscal 1998, the company contributed \$15.1 million compared to \$10.7 million in fiscal 1997. The company expects to make contributions of approximately \$5 to \$8 million in fiscal 1999.

#### EXCHANGE RATE FLUCTUATIONS

Exchange rate fluctuations can be a significant variable for international operations, especially fluctuations in local currencies where hedging opportunities are unreasonably expensive or unavailable. Beginning in the fourth quarter of fiscal 1997, several Asian currencies deteriorated against the dollar and continue to be an uncertainty.

#### INFLATION

The financial statements are presented on a historical cost basis and do not fully reflect the impact of prior years' inflation. While the U.S. inflation rate has been modest for several years, the company operates in many international areas with both inflation and currency issues. The ability to pass on inflation costs is an uncertainty due to general economic conditions and competitive situations. It is estimated that the cost of replacing the company's plant and equipment today is greater than its historical cost. Accordingly, depreciation expense would be greater if the expense were stated on a current cost basis.

#### YEAR 2000 READINESS DISCLOSURE

##### YEAR 2000 PREPARATION

Software failures due to calculations using Year 2000 dates are a known risk. The company is currently evaluating and managing the financial and operating risks associated with this problem. The company's Year 2000 efforts are addressed in the following sections: Information Technology, Process Control and Embedded Chip Systems, Third Parties, and Expenditures.

##### INFORMATION TECHNOLOGY

In 1996, the company's infrastructure and business applications computing portfolio (together, its Information Technology or I.T.) was assessed, and specific actions were initiated to achieve Year 2000 readiness on mission-critical systems. As of November 1998, more than 90% of the more than 3,500 I.T. systems currently maintained by the company have been prepared for the Year 2000. The company has targeted December 1998 for completion of its I.T. systems remediation efforts and expects that all mission-critical I.T. systems will be Year 2000-ready before December 1999. The company is also currently developing appropriate contingency plans to address potential I.T. interruptions associated with Year 2000 events that are missed or are outside the company's control. As a result of the company's inventory, risk assessment, remediation, and contingency planning with respect to the I.T. systems, the company believes that Year 2000 events caused by the company's I.T. systems would not have material adverse impacts on the company's operations or financial condition.

## PROCESS CONTROL AND EMBEDDED CHIP SYSTEMS

In 1997, the company began preparing for the Year 2000 with respect to systems containing process control or embedded chip computer programs (non-I.T.). As of November 1998, inventories and risk assessments for company-owned or operated non-I.T. systems are more than 90% complete. Over 1,400 process control or embedded chip suppliers have been contacted regarding product information, testing, remediation protocols, and the availability of replacement components, if required. Specific remediation and testing plans have been initiated towards achieving Year 2000 readiness of the company's mission-critical non-I.T. systems before December 1999. The company is currently developing appropriate contingency plans to address potential process interruptions caused by Year 2000 events. The company recognizes that the effectiveness of testing, remediation, and contingency planning depends on the availability and reliability of vendor information and replacement software components or other equipment from third parties and the interrelationship and dependency of company processes on the Year 2000 readiness of third-party equipment and infrastructure. The company cannot reasonably assess the impact of that dependency at this time, and whether there could be a material adverse impact on the company's operations and financial condition as a result of that dependency. The contingency plans will be designed to address this uncertainty and to minimize the impact.

## THIRD PARTIES

In support of the company's Year 2000 activities, approximately 1,000 suppliers that are key to the company's operations were identified and contacted regarding their plans for Year 2000 readiness. In the company's initial contacts with these key suppliers on the Year 2000 issue, the majority have indicated that they have active Year 2000 compliance programs intended to provide uninterrupted service. To the extent practicable, the company is currently developing appropriate contingency plans to address interruptions of supply associated with Year 2000 events affecting the company's key suppliers. In certain instances, such as electric supply, water, and certain chemical feedstocks, supply is not easily substitutable and contingency planning is difficult. If there is an extended material failure by several third parties or supporting infrastructures resulting from Year 2000 events (utilities, transportation, government, etc.) there could be material adverse impacts on the company's operations and financial condition.

## YEAR 2000 EXPENDITURES

The company currently estimates spending approximately \$40 million to complete its Year 2000 readiness program for the company and its proportionate share of its joint ventures, including approximately \$17 million allocable to assessing, preparing, remediating, or replacing I.T. systems for the Year 2000. The balance of \$23 million is the amount estimated to be spent in assessing, preparing, remediating, or replacing the company's process control and embedded chip systems for the Year 2000. Through fiscal 1998, approximately \$11 million has been expended. During fiscal years 1999 and 2000, the company expects Year 2000 spending to be approximately \$23 million and \$6 million, respectively.

Resources required to complete the I.T. remediation work are primarily provided by prioritization of ongoing I.T. efforts. Most of the effort to accomplish the embedded chip remediation is provided from the existing I.T., engineering and operations organizations.

## FORWARD-LOOKING STATEMENTS

The forward-looking statements contained in this document are based on current expectations regarding important risk factors. Actual results may differ materially from those expressed. In addition to important risk factors and uncertainties specifically referred to elsewhere in the Management's Discussion & Analysis, such as those relating to the Year 2000, other risk factors and uncertainties include the impact of worldwide economic growth, pricing of both the company's products and raw materials such as electricity and other factors resulting from fluctuations in interest rates and foreign currencies, the impact of competitive products and pricing, continued success of work process programs, and the impact of tax and other legislation and other regulations in the jurisdictions in which the company and its affiliates operate.

## FINANCIAL INSTRUMENTS SENSITIVITY ANALYSIS

The analysis below presents the sensitivity of the market value of the company's financial instruments to selected changes in market rates and prices. The range of changes chosen reflects the company's view of changes which are reasonably possible over a one-year period. Market values are the present value of projected future cash flows based on the market rates and prices chosen. The market values for interest rate risk and foreign currency risk are calculated by the company utilizing a third-party software model, which utilizes standard pricing models to determine the present value of the instruments

based on the market conditions (interest rates, spot and forward exchange rates, and implied volatilities) as of the valuation date. All instruments are entered into for other than trading purposes. The utilization of these instruments is described more fully in the financial instruments section of the Management's Discussion and Analysis and Notes 3, 5, and 6 to the consolidated financial statements. The major accounting policies for these instruments are described in Note 1 to the consolidated financial statements.

The company's derivative and other financial instruments consist of long-term debt (including current portion), interest rate swaps, interest rate and currency swaps, foreign exchange-forward contracts, and foreign exchange-option contracts. The net market value of these financial instruments combined is referred to below as the net financial instrument position. The net financial instrument position does not include other investments of \$18.4 million at 30 September 1998 and \$21.1 million at 30 September 1997 as disclosed in Note 3 to the consolidated financial statements. This amount principally represents an investment in a publicly traded foreign company accounted for by the cost method. The company assessed the materiality of the market risk exposure on these financial instruments and determined this exposure to be immaterial. At 30 September 1998 and 1997, the net financial instrument position was a liability of \$2,713.6 million and \$2,436.9 million, respectively. The increase in the net financial instrument position from fiscal 1997 is due mainly to the decline in market interest rates in the current year.

#### INTEREST RATE RISK

The company's debt portfolio, including interest rate swap agreements, as of 30 September 1998 is composed primarily of debt denominated in U.S. dollars (56%). The primary currencies of non-U.S. dollar debt are British Pounds, Netherland Guilders, Spanish Pesetas, and Canadian Dollars. The company has both fixed- and variable-rate debt. Changes in interest rates have different impacts on the fixed- and variable-rate portions of the company's debt portfolio. A change in interest rates on the fixed portion of the debt portfolio impacts the net financial instrument position but has no impact on interest incurred or cash flows. A change in interest rates on the variable portion of the debt portfolio impacts the interest incurred and cash flows but does not impact the net financial instrument position.

The sensitivity analysis related to the fixed portion of the company's debt portfolio assumes an instantaneous 100 basis point move in interest rates from their levels of 30 September 1998 and 1997, with all other variables (including foreign exchange rates) held constant. A 100 basis point increase in market interest rates would result in a decrease in the net financial instrument position of \$119 million and \$104 million at 30 September 1998 and 1997, respectively. A 100 basis point decrease in market interest rates would result in an increase in the net financial instrument position of \$141 million and \$114 million at 30 September 1998 and 1997, respectively.

Based on the variable-rate debt included in the company's debt portfolio, including interest rate swap agreements, as of 30 September 1998 and 1997, a 100 basis point increase in interest rates would result in an additional \$12 million and \$9 million in interest incurred per year at 30 September 1998 and 1997, respectively. A 100 basis point decline would lower interest incurred by \$12 million and \$9 million per year at 30 September 1998 and 1997, respectively.

#### FOREIGN CURRENCY EXCHANGE RATE RISK

The sensitivity analysis assumes an instantaneous 10% change in the foreign currency exchange rates from their levels of 30 September 1998 and 1997, with all other variables (including interest rates) held constant. A 10% strengthening of the functional currency of an entity versus all other currencies would result in a decrease in the net financial instrument position of \$113 million and \$95 million at 30 September 1998 and 1997, respectively. A 10% weakening of the functional currency of an entity versus all other currencies would result in an increase in the net financial instrument position of \$109 million and \$88 million at 30 September 1998 and 1997, respectively.

The primary currencies for which the company has foreign currency exchange rate exposure are the U.S. dollar versus the British Pound, Netherland Guilder, Spanish Peseta, Canadian Dollar, and German Mark. Foreign currency debt, interest rate and currency swaps, and foreign exchange forward contracts are used in countries where it does business, thereby reducing the company's net asset exposure. Foreign exchange forward contracts are also used to hedge the company's firm and highly anticipated foreign currency cash flows, along with foreign exchange option contracts. Thus, there is either an asset or cash flow exposure related to all the financial instruments in the above sensitivity analysis for which the impact of a movement in exchange rates would be in the opposite direction and materially equal to the impact on the instruments in the analysis.

## COMPANY RESPONSIBILITY FOR FINANCIAL STATEMENTS

The accompanying consolidated financial statements have been prepared by the company. They conform with generally accepted accounting principles and reflect judgments and estimates as to the expected effects of incomplete transactions and events being accounted for currently. The company believes that the accounting systems and related controls that it maintains are sufficient to provide reasonable assurance that assets are safeguarded, transactions are appropriately authorized and recorded, and the financial records are reliable for preparing such financial statements. The concept of reasonable assurance is based on the recognition that the cost of a system of internal accounting controls must be related to the benefits derived. The company maintains an internal audit function which is responsible for evaluating the adequacy and application of financial and operating controls and for testing compliance with company policies and procedures.

The independent public accountants are engaged to perform an audit of the consolidated financial statements in accordance with generally accepted auditing standards. Their report follows.

The Audit Committee of the Board of Directors is comprised entirely of individuals who are not employees of the company. This Committee meets periodically with the independent public accountants, the internal auditors, and management to consider audit results and to discuss significant internal accounting control, auditing, and financial reporting matters. The Audit Committee recommends the selection of the independent public accountants who are then appointed by the Board of Directors subject to ratification by the shareholders.

/s/ Harold A. Wagner

Harold A. Wagner  
Chairman and  
Chief Executive Officer

30 October 1998

/s/ Leo J. Daley

Leo J. Daley  
Vice President-Finance  
and Chief Financial Officer

30 October 1998

REPORT OF THE INDEPENDENT PUBLIC ACCOUNTANTS

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

We have audited the accompanying consolidated balance sheets of Air Products and Chemicals, Inc. (a Delaware corporation) and subsidiaries as of 30 September 1998 and 1997, and the related consolidated statements of income, cash flows, and shareholders' equity for each of the three years in the period ended 30 September 1998. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Air Products and Chemicals, Inc. and subsidiaries as of 30 September 1998 and 1997, and the results of their operations and their cash flows for each of the three years in the period ended 30 September 1998, in conformity with generally accepted accounting principles.

/s/ Arthur Andersen LLP

Arthur Andersen LLP  
Philadelphia, Pennsylvania

30 October 1998

## THE FINANCIAL STATEMENTS

## CONSOLIDATED INCOME {Air Products and Chemicals, Inc. and Subsidiaries}

Year Ended 30 September		1998	1997	1996
Millions of dollars, except per share				
Sales and Other Income	Sales o note 1	\$4,919.0	\$4,637.8	\$4,007.7
	Other income, net o note 19	14.8	24.2	25.7
		4,933.8	4,662.0	4,033.4
Costs and Expenses	Cost of sales	2,856.5	2,771.6	2,408.1
	Selling, distribution, and administrative	1,120.3	1,051.3	919.9
	Research and development	112.0	113.7	114.1
Operating Income		845.0	725.4	591.3
	Income from equity affiliates, net of related expenses o note 8	38.0	66.3	80.7
	Settlement gain on leveraged interest rate transactions o note 6	--	--	66.8
	Gain on American Ref-Fuel sale and contract settlements o note 19	103.5	--	--
	Interest expense o note 1	162.8	161.3	129.2
Income Before Taxes		823.7	630.4	609.6
	Income taxes o notes 1 and 10	276.9	201.1	193.2
Net Income		\$ 546.8	\$ 429.3	\$ 416.4
Monthly Average of Common Shares Outstanding (in millions)(a)	o note 13	215.5	220.1	223.4
Monthly Average of Common and Common Equivalent Shares Outstanding (in millions)(a)	o note 13	220.1	224.9	227.1
Basic Earnings per Common Share(a)	o note 13	\$2.54	\$1.95	\$1.86
Diluted Earnings per Common Share(a)	o note 13	\$2.48	\$1.91	\$1.83

The accompanying notes are an integral part of these statements.

(a) Adjusted for two-for-one stock split in 1998 (Note 9).

CONSOLIDATED BALANCE SHEETS {Air Products and Chemicals, Inc. and Subsidiaries}

30 September o Millions of dollars, except per share		1998	1997
<b>Assets</b>			
-----			
<b>CURRENT ASSETS</b>	Cash and cash items o note 1	\$ 61.5	\$ 52.5
	Trade receivables, less allowances for doubtful accounts of \$17.2 in 1998 and \$19.8 in 1997	881.1	879.6
	Inventories o notes 1 and 7	428.6	386.5
	Contracts in progress, less progress billings	94.1	121.3
	Other current assets	176.4	184.4
	<b>Total Current Assets</b>	<b>1,641.7</b>	<b>1,624.3</b>
-----			
<b>INVESTMENTS o notes 1, 3, and 8</b>	Investment in net assets of and advances to equity affiliates	362.0	555.7
	Other investments and advances	18.4	21.1
	<b>Total Investments</b>	<b>380.4</b>	<b>576.8</b>
-----			
<b>PLANT AND EQUIPMENT</b>	Plant and equipment, at cost o notes 1, 4, 11, and 15	9,489.5	8,727.3
	Less--Accumulated depreciation	4,703.4	4,286.1
	<b>Plant and Equipment, net</b>	<b>4,786.1</b>	<b>4,441.2</b>
-----			
<b>GOODWILL o note 1</b>		324.9	248.6
-----			
<b>OTHER NONCURRENT ASSETS</b>		356.5	353.2
-----			
<b>TOTAL ASSETS</b>		<b>\$7,489.6</b>	<b>\$7,244.1</b>
-----			
<b>Liabilities and Shareholders' Equity</b>			
-----			
<b>CURRENT LIABILITIES</b>	Payables, trade and other o note 19	\$ 478.7	\$ 616.6
	Accrued liabilities o note 19	332.8	315.7
	Accrued income taxes	30.9	15.9
	Short-term borrowings o note 19	270.1	100.9
	Current portion of long-term debt o note 4	153.1	75.5
	<b>Total Current Liabilities</b>	<b>1,265.6</b>	<b>1,124.6</b>
-----			
<b>LONG-TERM DEBT o notes 4 and 15</b>		2,274.3	2,291.7
-----			
<b>DEFERRED INCOME AND OTHER NONCURRENT LIABILITIES</b>		579.4	449.7
-----			
<b>DEFERRED INCOME TAXES o notes 1 and 10</b>		703.0	730.0
-----			
	<b>TOTAL LIABILITIES</b>	<b>4,822.3</b>	<b>4,596.0</b>
-----			
<b>SHAREHOLDERS' EQUITY o notes 1, 9, and 12</b>	Common Stock (par value \$1 per share; issued 1998 - 249,455,584 shares; 1997 - 124,727,792 shares)	249.4	124.7
	Capital in excess of par value	329.2	453.0
	Retained earnings	3,400.0	2,990.2
	Unrealized gain on investments	5.0	6.9
	Minimum pension liability adjustments	(14.3)	--
	Cumulative translation adjustments	(222.2)	(186.1)
	Treasury Stock, at cost (1998 - 19,531,143 shares; 1997 - 5,188,676 shares)	(657.0)	(297.3)
	Shares in trust (1998 - 18,454,673 shares; 1997 - 9,687,560 shares)	(422.8)	(443.3)
	<b>Total Shareholders' Equity</b>	<b>2,667.3</b>	<b>2,648.1</b>
-----			
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>		<b>\$7,489.6</b>	<b>\$7,244.1</b>

The accompanying notes are an integral part of these statements.

CONSOLIDATED CASH FLOWS {Air Products and Chemicals, Inc. and Subsidiaries}

Year Ended 30 September o Millions of dollars		1998	1997	1996
OPERATING ACTIVITIES	Net income	\$546.8	\$ 429.3	\$ 416.4
	Adjustments to reconcile income to cash provided by operating activities:			
	Depreciation o note 1	489.4	459.1	412.1
	Impairment loss of long-lived assets	--	9.3	--
	Termination of liabilities for leveraged interest rate swaps o note 6	--	--	(61.7)
	Deferred income taxes o note 10	62.3	94.1	87.5
	American Ref-Fuel divestiture deferred income taxes o note 17	(80.3)	--	--
	Other	42.0	(.4)	(50.4)
	Working capital changes that provided (used) cash, net of effects of acquisitions:			
	Trade receivables	11.2	(151.8)	(53.0)
	Inventories and contracts in progress	(2.7)	(13.3)	(28.6)
	Payables, trade and other	(144.4)	84.2	3.2
	Accrued liabilities	(23.3)	43.6	20.6
	Other	72.7	79.2	9.8
	Cash Provided by Operating Activities	973.7	1,033.3	755.9
INVESTING ACTIVITIES	Additions to plant and equipment(a)	(770.9)	(870.2)	(951.3)
	Acquisitions, less cash acquired(b)	(182.2)	(300.1)	(6.4)
	Investment in and advances to unconsolidated affiliates	(31.9)	(47.2)	(197.2)
	Proceeds from sale of assets and investments	328.3	97.6	63.2
	Other	(27.6)	17.0	11.8
	Cash Used for Investing Activities	(684.3)	(1,102.9)	(1,079.9)
FINANCING ACTIVITIES	Long-term debt proceeds(a)	102.2	667.5	626.7
	Payments on long-term debt	(70.7)	(168.3)	(168.0)
	Net increase (decrease) in commercial paper	185.7	(235.0)	42.4
	Net increase (decrease) in other short-term borrowings	(11.3)	6.7	11.7
	Dividends paid to shareholders	(134.0)	(123.8)	(116.7)
	Purchase of Treasury Stock o note 9	(365.0)	(135.0)	(100.3)
	Other	13.2	31.4	20.3
	Cash Provided by (Used for) Financing Activities	(279.9)	43.5	316.1
	Effect of Exchange Rate Changes on Cash	(0.5)	(0.1)	(0.9)
	Increase (Decrease) in Cash and Cash Items	9.0	(26.2)	(8.8)
	Cash and Cash Items--Beginning of Year	52.5	78.7	87.5
	Cash and Cash Items--End of Year o note 1	\$ 61.5	\$ 52.5	\$ 78.7

The accompanying notes are an integral part of these statements.

(a) Excludes capital leases of \$5.7 million, \$3.0 million, and \$4.7 million in 1998, 1997, and 1996, respectively.

(b) Excludes debt of \$10.0 million, \$1.1 million and \$5.2 million to former shareholders of companies acquired in 1998, 1997, and 1996, respectively.



CONSOLIDATED SHAREHOLDERS' EQUITY {Air Products and Chemicals, Inc. and Subsidiaries}

		Year Ended 30 September o Millions of dollars, except per share		
		1998	1997	1996
COMMON STOCK	Balance, Beginning of Year	\$ 124.7	\$ 124.7	\$ 124.7
	Two-for-one stock split	124.7	--	--
	Balance, End of Year	249.4	124.7	124.7
CAPITAL IN EXCESS OF PAR VALUE	Balance, Beginning of Year	453.0	461.2	465.9
	Issuance of Treasury Shares and Shares in Trust for benefit and stock option and award plans, 677,844 shares in 1998, 1,254,990 shares in 1997, and 625,308 shares in 1996	(11.2)	(26.8)	(13.0)
	Tax benefit of stock option and award plans	12.1	18.6	8.3
	Two-for-one stock split	(124.7)	--	--
	Balance, End of Year	329.2	453.0	461.2
RETAINED EARNINGS	Balance, Beginning of Year	2,990.2	2,687.2	2,387.6
	Net income	546.8	429.3	416.4
	Cash dividends--Common Stock, \$.64 per share in 1998, \$.58 per share in 1997, restated, and \$.53 per share in 1996, restated	(137.0)	(126.3)	(116.8)
	Balance, End of Year	3,400.0	2,990.2	2,687.2
UNREALIZED GAIN ON INVESTMENTS	Balance, Beginning of Year	6.9	40.4	41.0
	Change in unrealized gain, net of income taxes of \$1.0 in 1998, \$18.4 in 1997, and \$.3 in 1996	(1.9)	(33.5)	(.6)
	Balance, End of Year	5.0	6.9	40.4
MINIMUM PENSION LIABILITY ADJUSTMENTS	Balance, Beginning of Year	--	--	--
	Adjustments during year, net of income tax benefits of \$8.6 in 1998	(14.3)	--	--
	Balance, End of Year	(14.3)	--	--
CUMULATIVE TRANSLATION ADJUSTMENTS	Balance, Beginning of Year	(186.1)	(70.2)	(24.0)
	Translation adjustments, net of income tax benefits of \$13.8 in 1998, \$8.7 in 1997, and \$1.7 in 1996	(36.1)	(115.9)	(46.2)
	Balance, End of Year	(222.2)	(186.1)	(70.2)
TREASURY STOCK	Balance, Beginning of Year	(297.3)	(211.2)	(139.1)
	Issuance of Treasury Shares for benefit and stock option and award plans, 108,975 shares in 1998, 942,550 shares in 1997, and 625,308 shares in 1996	5.3	48.9	28.2
	Purchase of Treasury Shares, 9,371,741 in 1998, 1,918,465 in 1997, and 1,793,600 in 1996 o note 9	(365.0)	(135.0)	(100.3)
	Balance, End of Year	(657.0)	(297.3)	(211.2)
SHARES IN TRUST o note 1	Balance, Beginning of Year	(443.3)	(457.5)	(457.5)
	Issuance of Shares in Trust for benefit and stock option and award plans, 568,869 shares in 1998, and 312,440 shares in 1997	20.5	14.2	--
	Balance, End of Year	(422.8)	(443.3)	(457.5)
TOTAL SHAREHOLDERS' EQUITY		\$2,667.3	\$2,648.1	\$2,574.6

The accompanying notes are an integral part of these statements.

NOTES TO THE FINANCIAL STATEMENTS

1) MAJOR ACCOUNTING POLICIES

CONSOLIDATION PRINCIPLES

The consolidated financial statements include the accounts of Air Products and Chemicals, Inc. and its majority-owned subsidiary companies (the company). The equity method of accounting is used when the company has a 20% to 50% interest in other companies. Under the equity method, original investments are recorded at cost and adjusted by the company's share of undistributed earnings or losses of these companies.

LONG-TERM EQUIPMENT AND CONSTRUCTION REVENUE

Revenues from equipment sale contracts are recorded primarily using the percentage-of-completion method. Under this method, revenues for sale of major equipment, such as Liquid Natural Gas and Air Separation units, are recognized primarily based on labor hours incurred to date compared with total estimated labor hours. The equipment sold for the company's power generation and Pure Air flue gas treatment facilities recognizes revenues based primarily on contract costs incurred to date compared with total estimated contract costs. Changes to total estimated labor or contract costs and anticipated losses, if any, are recognized in the period determined.

DEPRECIATION

In the financial statements, the straight-line method of depreciation is used which deducts equal amounts of the cost of each asset from earnings every year over its expected useful life. The following table shows the estimated useful lives of different types of assets:

Classification	Expected Useful Lives
Buildings and components	5 to 45 years (principally 30 years)
Gas generating and chemical facilities, machinery and equipment	3 to 25 years (principally 14 to 20 years)

CAPITALIZED INTEREST

As the company builds new plant and equipment or invests in unconsolidated affiliates in the development stage, it includes in the cost of these assets a portion of the interest payments it makes during the year. In 1998, the amount of capitalized interest was \$15.7 million. In 1997, it was \$19.1 million, and in 1996, \$15.5 million.

INTEREST RATE SWAP AGREEMENTS

The company enters into interest rate swap agreements to reduce interest rate risks and to modify the interest rate characteristics of its outstanding debt. These agreements involve the exchange of fixed- and floating-rate interest payments periodically over the life of the agreement without the exchange of the underlying principal amounts. The net amount to be paid or received is accrued as interest rates change and recognized over the life of the agreements as an adjustment to interest expense. The fair value of these swap agreements is not recognized in the financial statements. The notional amount of these agreements is equal to or less than the designated debt instrument being hedged. The variable rate bases of the swap instruments and the debt to which they are designated are the same. The company will not enter into any future interest rate swap contracts which lever a move in interest rates on a greater than one-to-one basis.

The company is also party to interest rate and currency swap contracts. These contracts entail both the exchange of fixed- and floating-rate interest payments periodically over the life of the agreement and the exchange of one currency for another currency at inception and a specified future date. The contracts are used to hedge intercompany lending transactions and the value of investments in certain foreign subsidiaries and affiliates. Gains and losses on the currency component of these contracts, which hedge intercompany lending transactions, are recognized in income and offset the foreign exchange gains and losses of the related transaction. Gains and losses on the currency component of these contracts which hedge investments in certain foreign subsidiaries and foreign equity affiliates are not included in the income statement but are shown in the cumulative translation adjustments account. The interest component of these contracts is accounted for similarly to other interest rate swap agreements.

Gains and losses on terminated interest rate swap agreements are amortized into income over the remaining life of the underlying debt obligation or the remaining life of the original swap, if shorter.

#### FOREIGN CURRENCY

The value of the U.S. dollar rises and falls day to day on foreign currency exchanges. Since the company does business in many foreign countries, these fluctuations affect the company's financial position and results of operations.

Generally, foreign subsidiaries translate their assets and liabilities into U.S. dollars at current exchange rates--that is, the rates in effect at the end of the fiscal period. The gains or losses that result from this process are shown in the cumulative translation adjustments account in the shareholders' equity section of the balance sheet. Certain forward exchange contracts are used to hedge the value of investments in certain subsidiaries and equity affiliates. Gains and losses on the currency component of these contracts are not included in the income statement but are shown in the cumulative translation adjustment account.

The revenue and expense accounts of foreign subsidiaries are translated into U.S. dollars at the average exchange rates that prevailed during the period. Therefore, the U.S. dollar value of these items on the income statement fluctuates from period to period depending on the value of the dollar against foreign currencies.

Some transactions of the company and its subsidiaries are made in currencies different from their own. Gains and losses from these foreign currency transactions are generally included in income as they occur. The company enters into forward exchange and option combination contracts to manage the exposure to foreign currency fluctuations associated with certain monetary assets and liabilities denominated in a foreign currency as well as certain highly anticipated cash flows. Gains and losses on these contracts are recognized in income and offset the foreign exchange gains and losses of the related transaction.

Forward exchange and option combination contracts are sometimes used to hedge firm commitments, such as the purchase of plant and equipment. Additionally, purchased foreign currency options are sometimes used to hedge firm commitments and certain highly anticipated cash flows, including export sales transactions. The contracts are designated as, and effective as, hedges. The significant characteristics and expected terms of the highly anticipated cash flows are identified. Gains and losses resulting from these agreements are deferred and reflected as adjustments of the related foreign currency transactions. Gains and losses on terminated contracts, for which hedge criteria are met, are deferred and recognized as an adjustment of the related foreign currency transaction.

#### ENVIRONMENTAL EXPENDITURES

Accruals for investigatory and noncapital remediation costs are recorded when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Remediation costs are capitalized if the costs improve the company's property as compared with the condition of the property when originally constructed or acquired or if the costs prevent environmental contamination from future operations. Costs to operate and maintain the capitalized facilities are expensed as incurred.

The measurement of environmental liabilities is based on an evaluation of currently available facts with respect to each individual site and considers factors such as existing technology, presently enacted laws and regulations, and prior experience in remediation of contaminated sites. While the current law potentially imposes joint and several liability upon each party at any Superfund site, the company's contribution to clean up these sites is expected to be limited, given the number of other companies which have also been named as potentially responsible parties and the volumes of waste involved. A reasonable basis for apportionment of costs among responsible parties is determined and the likelihood of contribution by other parties is established. If it is considered probable that the company will only have to pay its expected share of the total site cleanup, the liability reflects the company's expected share. In determining the probability of contribution, the company considers the solvency of the parties, whether responsibility is being disputed, the terms of any existing agreements, and experience to date regarding similar matters. These liabilities do not take into account any claims for recoveries from insurance or third parties and are not discounted. As assessments and remediation progress at individual sites, these liabilities are reviewed periodically and adjusted to reflect additional technical and legal information which becomes available. Actual costs to be incurred at identified sites in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures. The accruals for environmental liabilities are reflected in the balance sheet primarily as part of other noncurrent liabilities.

## INCOME TAXES

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

## CASH AND CASH ITEMS

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

## INVENTORIES

To determine the cost of chemical inventories and some gas and equipment inventories in the United States, the company uses the last-in, first-out (LIFO) method. This method assumes the most recent cost is closer to the cost of replacing an item that has been sold. During periods of rising prices, LIFO maximizes the cost of goods sold and minimizes the profit reported on the company's income statement.

All other inventory values are determined using the first-in, first-out (FIFO) method. Cost of an item sold is based on the first item produced or on the current market value, whichever is lower.

## GOODWILL

When a company is acquired, the difference between the fair value of its net assets and the purchase price is goodwill. Goodwill is recorded as an asset on the balance sheet and is amortized into income over periods not exceeding 40 years. The company assesses the impairment of goodwill related to consolidated subsidiaries in accordance with Statement of Financial Accounting Standards (SFAS) No. 121. This statement requires the recognition of an impairment loss for an asset held for use when the estimate of undiscounted future cash flows expected to be generated by the asset is less than its carrying amount. Measurement of the impairment loss is based on the fair value of the asset, which is determined using valuation techniques such as the present value of expected future cash flows. The measurement of an impairment loss of goodwill related to equity affiliates, however, is based on expected undiscounted future cash flows and is excluded from the scope of SFAS No. 121.

## SHARES IN TRUST

The company has established a trust, funded with Treasury Stock, to provide for a portion of future payments to employees under the company's existing compensation and benefit programs. Shares issued to the trust are valued at market price on the date of contribution and reflected as a reduction of shareholders' equity in the balance sheet. As shares are transferred from the trust to fund compensation and benefit obligations, this equity account is reduced based on the original cost of shares to the trust; the satisfaction of liabilities is based on the fair value of shares transferred; and the difference between the fair value of shares transferred and the original cost of shares to the trust is charged or credited to capital in excess of par value.

## ESTIMATES AND ASSUMPTIONS

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

## 2) ACCOUNTING AND DISCLOSURE CHANGES

Effective fiscal 1998, the company implemented SFAS No. 128, "Earnings Per Share." This statement establishes new standards for computing and presenting earnings per share and requires the disclosure of basic and diluted amounts. Earnings per share amounts for all prior periods have been restated. Basic earnings per share, which is consistent with the company's previously reported amounts, is computed by dividing net income for the period by the weighted average number of common shares outstanding. Diluted earnings per share is computed by dividing net income for the period by the weighted average number of common shares outstanding and the dilutive common stock equivalents. See Note 13.

In fiscal 1998, the company implemented SFAS No. 132, "Employers' Disclosures about Pension and Other Post Retirement Benefits." This statement provides new disclosure requirements related to pension and other postretirement benefits in Note 14.

Beginning in fiscal 1998, the company adopted Statement of Position 98-5: "Reporting on the Costs of Start-up Activities." This statement requires start-up activities and organizational costs to be expensed as incurred. Implementation of this standard had no material impact on the financial statements.

Effective fiscal 1997, the company adopted SFAS No. 123, "Accounting for Stock-Based Compensation." This statement establishes financial and reporting standards for stock-based employee compensation plans using a fair value-based method. As permitted under SFAS No. 123, the company has elected to continue to account for compensation cost using the intrinsic value-based method of accounting as prescribed by Accounting Principles Board (APB) Opinion No. 25, "Accounting for Stock Issued to Employees." The company has included disclosures of the pro forma impact on net income of the application of the fair value-based method of accounting in Note 12.

## 3) FAIR VALUE OF FINANCIAL INSTRUMENTS

Summarized below are the carrying values and fair values of the company's financial instruments as of 30 September 1998 and 1997.

The fair value of the company's debt, interest rate swap agreements, forward exchange contracts, option combination contracts, and purchased foreign currency options is based on estimates using standard pricing models that take into account the present value of future cash flows as of the balance sheet date. The computation of fair values of these instruments is generally performed by the company. The fair value of other investments is based principally on quoted market prices. The carrying amounts reported in the balance sheet for cash and cash items, accrued liabilities, accrued income taxes, and short-term borrowings approximate fair value due to the short-term nature of these instruments. Accordingly, these items have been excluded from the table below.

	30 September (Millions of dollars)	1998 Carrying Value	1998 Fair Value	1997 Carrying Value	1997 Fair Value
ASSETS	Other investments	\$18.4	\$18.4	\$21.1	\$21.1
	Currency option contracts o note 5	1.2	1.2	1.5	2.6
	Interest rate swap agreements o note 6	77.4	125.8	69.5	85.7
LIABILITIES	Long-term debt, including current portion o note 4	\$2,427.4	\$2,822.2	\$2,367.2	\$2,535.4
	Forward exchange contracts o note 5	25.8	18.4	(2.8)	(10.2)

#### 4) LONG-TERM DEBT

The following table shows the company's outstanding debt at the end of fiscal 1998 and 1997, excluding any portion of the debt required to be repaid within a year:

30 September (Millions of dollars)	1998	1997
<b>PAYABLE IN U.S. DOLLARS:</b>		
8 7/8% notes, due 2001	\$ 100.0	\$ 100.0
Medium-term notes, Series C, due through 2001, weighted average interest rate 13.0%	101.0	126.0
8.35% debentures, due 2002, effective interest rate 8.4%	100.0	100.0
6 1/4% notes, due 2003	100.0	100.0
Medium-term notes, Series B, due through 2003, weighted average interest rate 6.1%	16.0	16.0
Commercial paper, due 2001 to 2003, weighted average interest rate 5.5%	80.5	80.5
7 3/8% notes, due 2005, effective interest rate 7.5%	150.0	150.0
8 1/2% debentures, due 2006, callable by company in 2004, effective interest rate 8.6%	100.0	100.0
7.578% notes, due 2006	72.5	72.5
Medium-term notes, Series F, due through 2016, weighted average interest rate 5.4%	475.0	375.0
Medium-term notes, Series D, due through 2016, weighted average interest rate 6.8%	400.0	400.0
8 3/4% debentures, due 2021, effective interest rate 9.0%	100.0	100.0
Medium-term notes, Series E, due through 2026, weighted average interest rate 7.3%	300.0	300.0
California Pollution Control bonds, weighted average interest rate of 5.8%	--	57.0
Other, due through 2016, weighted average interest rate 7.1%	28.1	47.1
<b>PAYABLE IN FOREIGN CURRENCY:</b>		
8.27% British Pound loan, due 1999	37.3	35.5
9.2% Deutsche Mark loan, due through 2002	6.4	7.7
5.97% Dutch Guilder loan, due through 2006	55.6	60.3
Belgian Franc loans, due through 2006, weighted average interest rate 6.8%	22.3	26.6
Other, due through 2003, weighted average interest rate 2.9%	8.7	15.7
Less: Unamortized discount	(4.5)	(4.9)
	2,248.9	2,265.0
<b>CAPITAL LEASE OBLIGATIONS:</b>		

United States, due through 2003, weighted average interest rate 7.5%	5.1	5.3
Foreign, due through 2004, weighted average interest rate 7.6%	20.3	21.4
	25.4	26.7
	\$2,274.3	\$2,291.7

Various debt agreements to which the company is a party include certain financial covenants and restrictions pertaining to the ability to create property liens and enter into certain sale and leaseback transactions.

The company has obtained the commitment of a number of commercial banks to lend money at market rates whenever needed by the company. These committed lines of credit also are used to support the issuance of commercial paper. In January 1996, the company entered into a \$600.0 million committed, multi-currency, syndicated credit facility which matures in January 2003. No borrowings were outstanding under this facility at 30 September 1998. At 30 September 1998, foreign subsidiaries had additional committed credit lines of \$104.2 million, \$19.5 million of which was borrowed and outstanding.

Maturities of long-term debt in each of the next five years are as follows: \$153.1 million in 1999; \$226.1 million in 2000; \$173.1 million in 2001; \$166.5 million in 2002; and \$175.2 million in 2003.

Included in the medium-term notes, Series E, is a \$100.0 million note, due in 2026, with a one-time put option exercisable by the investor in 2008. Included in the medium-term notes, Series F, is a \$100.0 million note, due in 2009, with a one-time put option exercisable by the investor in 1999, a \$100.0 million note, due in 2014, with a one-time put option exercisable by the investor in 1999, and a \$50.0 million note, due in 2016, with a one-time put option exercisable by the investor in 2002.

The two Series F medium-term notes with put options in 1999 and the 8.27% British Pound loan have been classified as long-term debt because of the company's intent and ability to refinance this debt on a long-term basis.

#### 5) FOREIGN EXCHANGE CONTRACTS

The company, in management of its exposure to fluctuations in foreign currency exchange rates, has entered into a variety of foreign exchange contracts, including forward, option combination, and purchased option contracts. These agreements generally involve the exchange of one currency for a second currency at some future date. Counterparties to these agreements are major international financial institutions. The company's counterparty credit guidelines and management's position regarding possible exposure to losses related to credit risk is comparable to that for interest rate swap agreements as discussed in Note 6.

The company enters into forward exchange and option combination contracts to reduce the exposure to foreign currency fluctuations associated with certain monetary assets and liabilities, as well as certain firm commitments and highly anticipated cash flows. Forward exchange contracts are also used to hedge the value of investments in certain foreign subsidiaries and affiliates by creating a liability in a currency in which the company has a net equity position. The company is also party to purchased option contracts which, if exercised, involve the sale or purchase of foreign currency at a fixed exchange rate for a specified period of time. These contracts are used to hedge firm commitments and certain highly anticipated cash flows, including export sales transactions, through fiscal 1999.

The following table illustrates the U.S. dollar equivalent, including offsetting positions, of foreign exchange contracts at 30 September 1998 and 1997 along with maturity dates, net unrealized gain (loss), and net unrealized gain (loss) deferred. At the end of fiscal 1998, more than 90% of all exposures to foreign currency fluctuations resulting from cash flows identified as being denominated in a currency other than an entity's functional currency anticipated over the next year are hedged by forward exchange, option combination, or purchased option contracts.



(Millions of dollars)	Contract Amount (\$U.S. Equivalent)	Latest Maturity Date	Unrealized Gross Gain	Unrealized Gross (Loss)	Net Unrealized Gain (Loss)	Net Unrealized Gain (Loss) Deferred
30 September 1998						
-----						
Forward exchange contracts:						
-----						
\$U.S./Spanish Peseta	\$ 332.2	2003	\$--	\$(19.4)	\$(19.4)	\$--
\$U.S./U.K. Pound Sterling	285.5	1999	5.2	(2.0)	3.2	4.5
Spanish Peseta/U.K. Pound Sterling	71.5	1999	1.1	--	1.1	1.1
\$U.S./Netherland DG	65.8	1999	.4	(3.2)	(2.8)	.4
Other	236.6	2000	2.2	(2.7)	(.5)	1.4
	991.6		8.9	(27.3)	(18.4)	7.4
-----						
Option contracts:						
-----						
\$U.S./German DM	50.5	1999	--	(.4)	(.4)	(.4)
\$U.S./U.K. Pound Sterling	22.5	1999	--	--	--	--
\$U.S./Japanese Yen	15.6	1999	.4	--	.4	.4
Other	19.7	1999	--	--	--	--
	108.3		.4	(.4)	--	--
	\$1,099.9		\$9.3	\$(27.7)	\$(18.4)	\$7.4
-----						
30 September 1997						
-----						
Forward exchange contracts:						
-----						
\$U.S./Netherland DG	\$164.9	1998	\$ 3.8	\$ (.5)	\$ 3.3	\$--
\$U.S./U.K. Pound Sterling	78.9	1998	.2	(.3)	(.1)	(.1)
\$U.S./\$ Canadian	63.5	1999	1.1	(.7)	.4	.5
Netherland DG/U.K. Pound Sterling	48.3	1998	4.2	--	4.2	4.2
Other	77.8	1998	3.5	(1.1)	2.4	2.8
	533.4		12.8	(2.6)	10.2	7.4
-----						
Option contracts:						
-----						
\$U.S./German DM	78.3	1998	.5	--	.5	.5
\$U.S./U.K. Pound Sterling	25.8	1998	--	--	--	--
\$U.S./Japanese Yen	19.2	1998	.4	--	.4	.4
Other	35.7	1998	.2	--	.2	.2
	159.0		1.1	--	1.1	1.1
	\$692.4		\$13.9	\$(2.6)	\$11.3	\$8.5
-----						

The company's net equity position in its principal foreign subsidiaries at 30 September 1998 was \$1,449.0 million. These subsidiaries have operations in the United Kingdom, Germany, Spain, France, Netherlands, Belgium, Brazil, Japan, Singapore, Indonesia, and Canada.

In addition to its foreign subsidiaries, the company has an equity position in foreign equity affiliates as disclosed in Note 8.

6) INTEREST RATE SWAP AGREEMENTS

The company enters into interest rate swap agreements to change the fixed/variable interest rate mix of the debt portfolio in order to maintain the percentage of fixed- and variable-rate debt within certain parameters set by management. In accordance with these parameters, the agreements are used to reduce interest rate risks and costs inherent in the company's debt portfolio. Accordingly, the company enters into agreements to both effectively convert variable-rate debt to fixed-rate debt and to effectively convert fixed-rate debt to variable-rate debt, which is principally indexed to LIBOR rates. The company has also entered into variable to variable interest rate swap contracts to effectively convert the stated variable interest rates on \$60.0 million of the medium-term notes, Series C, to an average interest rate slightly above the three-month U.S. dollar LIBOR rate. The fair value gain (loss) on the variable to variable swaps is equally offset by a fair value loss (gain) on the related debt agreements.

The company is also party to interest rate and currency swap contracts. These contracts effectively convert the currency denomination of a debt instrument into another currency in which the company has a net equity position while changing the interest rate characteristics of the instrument.

Counterparties to interest rate swap agreements are major financial institutions. The company has established counterparty credit guidelines and only enters into transactions with financial institutions of investment grade or better. Minimum credit standards become more stringent as the duration of the swap agreement increases. The company has provisions to require collateral in certain instances. The market value of such collateral posted in the company's favor as of 30 September 1998 is \$75.5 million and is a result of the fair value exposure to an investment grade counterparty exceeding the company's policy maximum. Management believes the risk of incurring losses related to credit risk is remote.

The table below illustrates the contract or notional (face) amounts outstanding, maturity dates, weighted average receive and pay rates as of the end of the fiscal year, and the net unrealized gain of interest rate swap agreements by type at 30 September 1998 and 1997. The notional amounts are used to calculate contractual payments to be exchanged and are not generally actually paid or received, except for the currency swap component of the contracts. The net unrealized gain on these agreements, which equals their fair value, is based on the relevant yield curve at the end of the fiscal year.

(Millions of dollars)	Notional Amount	Maturities	Weighted Average Rate Receive	Weighted Average Rate Pay	Unrealized Gross Gain	Unrealized Gross (Loss)	Net Unrealized Gain
30 September 1998							
Fixed to Variable	\$461.0	1999-2007	7.0%	5.7%	\$ 37.6	\$--	\$ 37.6
Variable to Variable	60.0	2000-2001	16.4%	5.8%	86.4	--	86.4
Interest Rate/Currency	419.3	1998-2005	6.0%	8.4%	18.4	(16.6)	1.8
	\$940.3				\$142.4	\$(16.6)	\$125.8
30 September 1997							
Fixed to Variable	\$461.0	1998-2007	6.7%	5.6%	\$ 10.2	\$ (.6)	\$ 9.6
Variable to Variable	60.0	2000-2001	14.5%	5.9%	68.9	--	68.9
Interest Rate/Currency	354.1	1998-2005	6.2%	8.9%	11.2	(4.0)	7.2
	\$875.1				\$ 90.3	\$(4.6)	\$85.7

Of the net unrealized gain as of 30 September 1998 and 1997, a net gain of \$48.4 million and \$16.2 million, respectively, has not been recognized in the financial statements. At the end of fiscal 1998 and 1997, a deferred loss of \$7.1 million and \$8.6 million, respectively, resulted from terminated contracts. Subsequent to 30 September 1998, two fixed to variable interest rate swap agreements with a total notional amount of \$100 million were terminated, resulting in a deferred gain of \$7.5 million.

After the effects of interest rate swap agreements, the company's total debt, including current portion, is composed of 57% fixed-rate debt and 43% variable-rate debt as of 30 September 1998.

During the second quarter of fiscal 1996, the company reached a \$66.8 million settlement with Bankers Trust Company over \$107.7 million in losses in fiscal 1994 associated with the termination and closure of leveraged interest rate swap contracts. The settlement included the termination of two previously closed contracts with Bankers Trust. Prior to the settlement, there was an outstanding liability of \$61.7 million associated with these closed contracts. The after-tax gain related to this settlement was \$40.7 million.

#### 7) INVENTORIES

The components of inventories are as follows:

30 September (Millions of dollars)	1998	1997
Inventories at FIFO cost:		
-----		
Finished goods	\$286.3	\$264.3
-----		
Work in process	38.4	30.0
-----		
Raw materials and supplies	136.6	131.7
-----		
	461.3	426.0
Less excess of FIFO cost over LIFO	(32.7)	(39.5)
-----		
	\$428.6	\$386.5

Inventories valued using the LIFO method comprised 49.3% and 51.5% of consolidated inventories before LIFO adjustment at 30 September 1998 and 1997, respectively. Liquidation of prior years' LIFO inventory layers in 1998, 1997, and 1996 did not materially affect cost of sales in any of these years.

#### 8) SUMMARIZED FINANCIAL INFORMATION OF EQUITY AFFILIATES

The following table presents summarized financial information on a combined 100% basis of the principal companies accounted for by the equity method. Amounts presented include the accounts of the following equity affiliates: Cambria CoGen Company (50%); Stockton CoGen Company (50%); Orlando CoGen Limited, L.P. (50%); Pure Air (50%); Pure Air on the Lake, L.P. (50%); Bangkok Cogeneration Company Limited (48.9%); Sankyo Air Products Co., Ltd. (50%); San-Apro Ltd. (50%); Sapio Produzione Idrogeno Ossigeno S.r.l. (49%); INFRA Group (40%); San Fu Chemicals (48.1%); ProCal (50%); Korea Industrial Gases (48.90%); Air Products South Africa (50%); Bangkok Industrial Gases Company Ltd. (49%); Sitt Tatt Industrial Gases (30%); and principally other industrial gas producers. In fiscal 1997, the company had a joint venture interest in American Ref-Fuel Company's waste-to-energy business. The company sold substantially all of this interest in fiscal 1998. See Note 17.

(Millions of dollars)	1998	1997
Current assets	\$ 458.8	\$ 624.9
Noncurrent assets	1,416.8	2,644.6
Current liabilities	372.4	519.6
Noncurrent liabilities	979.4	1,998.5
Net sales	1,168.1	1,361.2
Sales less cost of sales	416.7	575.2
Net income	110.0	268.1

The company's share of income of all equity affiliates for 1998, 1997, and 1996 was \$48.4 million, \$84.3 million, and \$101.4 million, respectively. These amounts exclude \$10.4 million, \$18.0 million, and \$20.7 million of related net expenses incurred by the company. Dividends received from equity affiliates were \$44.6 million, \$61.5 million, and \$63.7 million in 1998, 1997, and 1996, respectively.

The investment in net assets of and advances to equity affiliates at 30 September 1998 and 1997 included investment in foreign affiliates of \$304.3 million and \$299.3 million, respectively.

As of 30 September 1998 and 1997, the amount of investment in companies accounted for by the equity method included goodwill in the amount of \$45.7 million and \$46.9 million, respectively. The goodwill is being amortized into income over periods not exceeding 40 years.

#### 9) CAPITAL STOCK

The authorized capital stock consists of 25 million preferred shares with a par value of \$1 per share, none of which was outstanding at 30 September 1998, and 300 million shares of Common Stock with a par value of \$1 per share. In May 1998, the Board of Directors authorized a two-for-one stock split. On June 15, 1998, each shareholder was issued one additional share of Common Stock for each share owned as of 15 May 1998. The consolidated financial statements have been adjusted, where appropriate, to reflect the effects of the stock split for all periods presented. At 30 September 1998, the number of shares of Common Stock outstanding was 211,469,768.

In April 1996, the company announced its plan to commence a share repurchase program with the intent to spend \$600 million to acquire approximately 10% of the 112 million common shares then outstanding. During fiscal 1998 and 1997, the company spent \$365.0 million and \$135.0 million to purchase 9.4 million (post-split basis) and 1.9 million treasury shares, respectively.

The company established a trust to fund a portion of future payments to employees under existing compensation and benefit programs in fiscal 1994. The trust, which is administered by an independent trustee, was funded with 20 million shares of Treasury Stock. It will not increase or alter the amount of benefits or compensation which will be paid under existing plans. The establishment of the trust will not have an effect on earnings per share or return on average shareholders' equity. In fiscal 1998, shares have been distributed from the trust. As of 30 September 1998, the balance of Treasury Stock remaining in the trust is 18.5 million shares.

On March 19, 1998, the Board of Directors unanimously approved a shareholder rights plan to replace the company's previous rights plan, which expired March 16, 1998. Under the plan, the Board of Directors declared a dividend of one Right for each share of Common Stock outstanding at the close of business on March 19, 1998 and with respect to Common Shares issued thereafter until the Distribution Date (as defined below). Each Right, when it becomes exercisable as described below, will entitle its holder to purchase one one-thousandth (1/1,000) of a share of Series A Participating Cumulative Preferred Stock, par value \$1 per share, of the company (the "Preferred Shares") at a price of \$345.00 (the "Purchase Price").

Until the earlier of (i) such time as the company learns that a person or group has acquired, or obtained the right to acquire, beneficial ownership of more than 15% of the outstanding Common Shares (such person or group being called an "Acquiring Person"), and (ii) such date, if any, as may be designated by the Board of Directors following the commencement of, or first public disclosure of an intention to commence, a tender or exchange offer for outstanding Common Shares which could result in such person or group becoming the beneficial owner of more than 15% of the outstanding Common Shares, (the earlier of such dates being called the "Distribution Date"), the Rights will be evidenced by certificates for Common Shares and not by separate Right certificates. Therefore, until the Distribution Date, the Rights will be transferred with and only with the Common Shares. The Rights are not exercisable until the Distribution Date and will expire on March 19, 2008 (the "Expiration

Date"), unless earlier redeemed by the company as described below.

Subject to the right of the Board of Directors to redeem the Rights, at such time as there is an Acquiring Person, each Right (other than Rights held by an Acquiring Person) will thereafter have the right to receive, upon exercise thereof, for the Purchase Price, that number of one one-thousandth of a Preferred Share equal to the number of Common Shares which at the time of such transaction would have a market value of twice the Purchase Price. If the company is acquired in a merger or other business combination by an Acquiring Person or 50% or more of the company's assets or assets representing 50% or more of the company's earning power are sold, leased, exchanged or otherwise transferred (in one or more transactions) to an Acquiring Person, each Right (other than Rights held by an Acquiring Person) will entitle its holder to purchase, for the Purchase Price, that number of common shares of such corporation (or, if such corporation is not publicly traded, common shares of any publicly traded affiliate of such corporation) which at the time of the transaction would have a market value (or, if the Acquiring Person is not a publicly traded corporation, having a book value) of twice the Purchase Price.

The Rights are redeemable by the Board of Directors at a redemption price of \$.01 per Right any time prior to the earlier of such time as there is an Acquiring Person and Expiration Date.

#### 10) INCOME TAXES

The following table shows the components of the provision for income taxes:

(Millions of dollars)	1998	1997	1996
Federal:			
Current	\$238.7	\$ 61.3	\$ 75.6
Deferred	(32.5)	90.6	69.5
	206.2	151.9	145.1
State:			
Current	22.7	3.6	7.9
Deferred	(10.8)	6.5	11.9
Impact of law/rate change	--	--	(1.4)
	11.9	10.1	18.4
Foreign:			
Current	33.5	42.1	22.2
Deferred	24.7	4.2	7.5
Impact of law/rate change	.6	(7.2)	--
	58.8	39.1	29.7
	\$276.9	\$201.1	\$193.2

The significant components of deferred tax assets and liabilities are as follows:

30 September (Millions of dollars)	1998	1997
Gross deferred tax assets:		
Pension and other compensation accruals	\$118.5	\$ 95.2
Alternative minimum tax	--	46.3
Tax loss and investment tax credit carryforwards	26.7	33.9
Reserves and accruals	26.0	23.4
Postretirement benefits	29.5	29.5
Inventory	18.2	20.4
Other	46.0	48.2
Valuation allowance	(14.6)	(22.6)
Deferred tax assets	250.3	274.3
Gross deferred tax liabilities:		
Plant and equipment	706.4	622.9
Investment in partnerships	81.7	198.6
Employee benefit plans	50.1	43.9

Currency gains	27.7	24.2
-----		
Foreign currency translation adjustment	--	7.7
-----		
Other	54.9	73.9
-----		
Deferred tax liabilities	920.8	971.2
-----		
Net deferred income tax liability	\$670.5	\$696.9

Net current deferred tax assets of \$32.5 million and \$33.1 million are included in other current assets at 30 September 1998 and 1997, respectively.

In fiscal years 1997 and 1996, the company's domestic operations were subject to taxes under the Alternative Minimum Tax (AMT) for income tax purposes. The AMT limited the utilization of tax benefits in those years. The unused tax benefits were carried forward for use in future years. In fiscal 1998, the company's domestic operations were not subject to AMT, and all unused tax benefits were utilized.

Foreign and state operating loss carryforwards on 30 September 1998 were \$50.3 million and \$57.3 million, respectively. Foreign losses of \$7.5 million are available to offset future foreign income through 2008. The balance of these losses has an unlimited carryover period. State operating loss carryforwards are available through 2012. Foreign capital loss carryforwards were \$2.2 million on 30 September 1998 and have an unlimited carryover period.

The valuation allowance as of 30 September 1998 primarily relates to the tax loss carryforwards referenced above. If events warrant the reversal of the \$14.6 million valuation allowance, it would reduce intangible assets by \$6.8 million and reduce tax expense by \$7.8 million.

Major differences between the federal statutory rate and the effective tax rate are:

(Percent of income before taxes)	1998	1997	1996
United States federal statutory rate	35.0%	35.0%	35.0%
State taxes, net of federal tax benefit	1.9	2.2	2.2
Equity in earnings of foreign affiliates	(1.9)	(2.5)	(4.1)
Foreign tax credits and refunds on dividends received from foreign affiliates	(1.0)	.1	.1
Nonconventional fuel credits	--	(.8)	(1.1)
Export tax benefits	(.9)	(.6)	(.7)
Investment tax credits	(.3)	(1.1)	(.5)
Impact of state law/rate change	--	--	(.2)
Sale of American Ref-Fuel Company	.8	--	--
Power contract restructuring	.4	--	--
Cogeneration project contract settlement	.2	--	--
Derivative settlement	--	--	.9
Other	(.6)	(.4)	.1
Effective tax rate	33.6%	31.9%	31.7%

The following table summarizes the income of U.S. and foreign operations, before taxes:

(Millions of dollars)	1998	1997	1996
Income from consolidated operations:			
United States	\$640.3	\$426.6	\$416.4
Foreign	148.4	119.5	91.8
Income from equity affiliates	35.0	84.3	101.4
	\$823.7	\$630.4	\$609.6

Income before taxes presented above is distributed geographically according to where the income is taxed. This differs from the geographic segment operating income presented in Note 20 in which items of income and expense are allocated to the region where revenues are generated.

The company does not pay or record U.S. income taxes on the undistributed earnings of its foreign subsidiaries and its 20% to 50% owned corporate joint ventures as long as those earnings are permanently reinvested in the companies that produced them. These cumulative undistributed earnings are included in consolidated retained earnings on the balance sheet and amounted to \$693.6 million at the end of fiscal 1998. An estimated \$151.0 million in U.S. income and foreign withholding taxes would be due if these earnings were remitted as dividends, after payment of all deferred taxes.

#### 11) PLANT AND EQUIPMENT

The major classes of plant and equipment, at cost, are as follows:

30 September (Millions of dollars)	1998	1997
Land	\$ 127.3	\$ 102.8
Buildings	599.9	580.2
Gas generating and chemical facilities, machinery and equipment	8,208.7	7,512.6
Construction in progress	553.6	531.7
	\$9,489.5	\$8,727.3



12) STOCK OPTION AND AWARD PLANS

LONG-TERM INCENTIVE PLAN

The Long-Term Incentive Plan (the "Plan") provides for four principal types of awards to executives and key employees: stock options, stock appreciation rights, performance units, and deferred stock units. The award type most frequently used is the nonqualified stock option with an exercise price fixed at 100% of the fair market value of a share of Air Products common stock ("stock") on the date of grant. Nonqualified stock options standardly become exercisable in cumulative installments of 33 1/3% one year after the date of grant and annually thereafter, and must be exercised no later than ten years and one day from the date of grant.

On 1 October 1996, 639,800 premium priced stock options were granted in addition to the fair market value stock options. These stock options have an exercise price at 24% above market on the date of grant (or \$36). The awards are 100% vested after two years and are exercisable over an additional three-year period. As of 30 September 1998, a total of 11,813,142 options including both fair market value and premium priced stock options were outstanding.

In fiscal 1997, the company also granted deferred stock units identified as performance shares to executive officers and other key employees. These awards provide for the issuance of common stock based on certain management objectives achieved by the performance period ending 30 September 1998. The number of shares to be paid out are 557,750 share units. Compensation expense is recognized over a period ranging from two to ten years.

Prior to the issuance of performance shares, the company granted deferred stock units as career share awards in fiscal years 1992 through 1997 to certain executive officers and other key employees. Career shares are deferred stock units payable in shares of stock after retirement. Career share awards equivalent to 862,874 and 899,568 shares of stock were outstanding at the end of fiscal years 1998 and 1997, respectively. Compensation expense was computed by multiplying the number of units granted by the market price of the stock on the date of grant. The cost is recognized over a ten-year period.

The following table summarizes stock option transactions (fair market value stock options and premium priced stock options) as follows:

	Number of Shares(a)	Average Price(a)
-----		
Outstanding at 30 September 1995	10,265,068	\$15.71
-----		
Granted	1,589,980	26.03
-----		
Exercised	(1,145,906)	11.04
-----		
Forfeited	(31,598)	23.24
-----		
Outstanding at 30 September 1996	10,677,544	17.72
-----		
Granted	2,437,300	31.00
-----		
Exercised	(2,243,956)	12.62
-----		
Forfeited	(11,002)	25.94
-----		
Outstanding at 30 September 1997	10,859,886	21.73
-----		
Granted	2,014,500	41.31
-----		
Exercised	(1,021,169)	13.56
-----		
Forfeited	(40,075)	32.32
-----		
Outstanding at 30 September 1998	11,813,142	25.73
-----		
Exercisable at end of year		7,413,707
-----		
Participants at end of year		509
-----		
Available for future grant at end of year		6,723,610
-----		

(a) All amounts have been adjusted to reflect the two-for-one stock split (see Note 9).

The following table summarizes information about options outstanding at 30 September 1998:

Range of Exercise Prices(a)	Options Outstanding			Options Exercisable	
	Number Outstanding(a)	Weighted-Average Remaining Contractual Life (Years)	Weighted-Average Exercise Price(a)	Number Exercisable(a)	Weighted-Average Exercise Price(a)
\$10.41-\$13.64	1,511,000	2.59	\$11.53	1,511,000	\$11.53
15.47- 19.56	2,158,573	5.01	18.26	2,158,573	18.26
22.19- 26.03	3,745,063	6.91	24.07	3,165,560	23.71
29.06- 41.69	4,398,506	9.46	35.70	578,574	29.21

(a) All amounts have been adjusted to reflect the two-for-one stock split (see Note 9).

#### OTHER STOCK-BASED INCENTIVES

In addition to the Long-Term Incentive Plan, there is a Directors' Stock Option Plan. Options awarded to non-employee directors are exercisable six months after grant date and must be exercised no later than ten years and one day from the date of grant. Under this plan, there were 84,000 and 64,000 options outstanding and exercisable at the end of fiscal years 1998 and 1997, respectively. Option prices were \$39.37 and \$34.60 per share for options issued in fiscal 1998 and 1997, respectively.

The company grants deferred stock unit awards to certain key employees below the executive level. Deferred stock units equivalent to 798,160 and 800,270 shares of stock were outstanding at the end of fiscal years 1998 and 1997, respectively. Compensation expense is computed by multiplying the number of units granted by the market value of the stock on the date of grant. The cost is recognized over the four-year deferral period applicable to the awards.

In October 1995 and 1997, the company awarded 200 stock options with exercise prices of \$26.03 and \$41.31, respectively, to virtually all employees. These options vest three years after date of grant and are exercisable over an additional seven-year period. At 30 September 1998, 2,492,800 options for the 1995 grant were outstanding and 3,176,800 options for the 1997 grant were outstanding.

#### PRO FORMA INFORMATION

SFAS No. 123 requires the company to disclose pro forma net income and pro forma earnings per share amounts as if compensation expense were recognized for options granted after fiscal year 1995. Using this approach, net income and earnings per share would have been reduced to the pro forma amounts indicated in the table:

(Millions of dollars, except per share)	1998	1997	1996
Net earnings			
As reported	\$546.8	\$429.3	\$416.4
Pro forma	522.0	415.5	407.3
Basic earnings per share(a)			
As reported	\$ 2.54	\$ 1.95	\$ 1.86
Pro forma	2.42	1.89	1.82
Diluted earnings per share(a)			
As reported	\$ 2.48	\$ 1.91	\$ 1.83
Pro forma	2.36	1.84	1.79

(a) Adjusted for two-for-one stock split in 1998.

This pro forma impact may not be representative of the effects for future years

and is likely to increase as additional options are granted and amortized over the vesting period.

For disclosure purposes, the fair value of each stock option granted is estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average of assumptions:

	1998	1997	1996
Dividend yield	2.0%	2.3%	2.3%
Expected volatility	20.1%	25.3%	23.5%
Risk-free interest rate	6.0%	6.6%	6.1%
Expected life (years)	6.2	7.2	6.1

The Black-Scholes option-pricing model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option-pricing models require the input of subjective assumptions, including the expected stock price volatility. Because the company's options have characteristics different from those of traded options, in the opinion of management, the existing models do not necessarily provide a reliable single measure of the fair value of its options.

### 13) EARNINGS PER SHARE

Effective first quarter of fiscal 1998, the company adopted SFAS No. 128, "Earnings Per Share." This standard establishes new accounting and disclosure for earnings per share (EPS). The following table sets forth the computation of basic and diluted EPS:

	30 September (Millions of dollars, except per share)	1998	1997	1996
Numerator:				
Income available to common shareholders used in basic and diluted earnings per share		\$546.8	\$429.3	\$416.4
Denominator:				
Weighted-average number of common shares used in basic earnings per share		215.5	220.1	223.4
Effect of dilutive securities:				
Employee stock options		3.6	3.8	2.9
Other award plans		1.0	1.0	.8
		4.6	4.8	3.7
Weighted-average number of common shares and dilutive potential common shares used in diluted earnings per share		220.1	224.9	227.1
Basic earnings per share		\$2.54	\$1.95	\$1.86
Diluted earnings per share		\$2.48	\$1.91	\$1.83

In October 1998, the company's Board of Directors authorized an Air Products stock repurchase plan of up to 25 million shares. The company expects to purchase between \$100 million and \$200 million of Air Products shares in fiscal 1999.

14) PENSION AND OTHER POSTRETIREMENT BENEFITS

The following table shows reconciliations of the domestic pension plan and other postretirement plan benefits as of 30 September 1998 and 1997. The foreign pension plan information is as of 30 June 1998 and 1997:

(Millions of dollars)	Pension Benefits		Other Benefits	
	1998	1997	1998	1997
<b>CHANGE IN BENEFIT OBLIGATION</b>				
Benefit obligation on 1 October	\$ 979.4	\$836.7	\$56.4	\$52.1
Service cost	38.1	32.8	4.1	3.5
Interest cost	74.6	68.2	4.3	4.2
Amendments	8.0	1.7	--	--
Actuarial loss (gain)	230.2	80.3	4.5	1.1
Plan participant contributions	3.0	2.4	--	--
Benefits paid	(38.5)	(40.6)	(4.7)	(4.5)
Currency translation	12.4	(2.1)	--	--
Benefit obligation on 30 September	\$1,307.2	\$979.4	\$64.6	\$56.4
<b>CHANGE IN PLAN ASSETS</b>				
Fair value of plan assets on 1 October	\$ 943.4	\$787.0	\$--	\$--
Actual return on plan assets	80.8	178.2	--	--
Company contributions	15.1	10.7	--	--
Plan participant contributions	3.0	2.4	--	--
Benefits paid	(34.7)	(35.7)	--	--
Acquisition	18.7	--	--	--
Currency translation/Other	18.4	.8	--	--
Fair value of plan assets on 1 October	\$1,044.7	\$943.4	\$--	\$--
Funded status of the plan	\$(262.5)	\$(36.0)	\$(64.6)	\$(56.4)
Unrecognized actuarial loss (gain)	214.9	(6.3)	(3.1)	(7.7)
Unrecognized prior service cost	16.5	14.0	(1.2)	(1.3)
Unrecognized net transition obligation (asset)	(19.1)	(21.8)	--	--
Net amount recognized	\$ (50.2)	\$(50.1)	\$(68.9)	\$(65.4)
Total recognized amounts in the balance sheet consist of:				
Prepaid benefit cost	\$109.8	\$88.6	\$--	\$--
Accrued benefit liability	(196.4)	(154.2)	(68.9)	(65.4)
Intangible asset	13.5	15.5	--	--
Shareholders' equity	22.9	--	--	--
Net amount recognized	\$(50.2)	\$(50.1)	\$(68.9)	\$(65.4)
<b>WEIGHTED AVERAGE ASSUMPTIONS AS OF 30 SEPTEMBER</b>				
Discount rate	6.6%	7.6%	6.5%	7.5%
Expected return on plan assets	9.5%	10.0%	--	--
Rate of compensation increase	4.7%	4.8%	5.0%	5.0%

For measurement purposes, a 9% annual rate of increase in the per capita cost of covered health care benefits was assumed for fiscal 1999. The rate was assumed to decrease gradually to 5.5% for fiscal 2006 and thereafter.

(Millions of dollars)	Pension Benefits			Other Benefits		
	1998	1997	1996	1998	1997	1996
COMPONENTS OF NET PERIODIC BENEFIT COST						
Service cost	\$38.1	\$32.8	\$33.0	\$4.1	\$3.5	\$3.9
Interest cost	74.6	68.2	63.4	4.3	4.2	4.4
Expected return on plan assets	(80.8)	(73.0)	(64.4)	--	--	--
Prior service cost amortization	1.9	1.8	1.6	(.1)	(.1)	--
Actuarial (gain)/loss amortization	2.8	.5	4.6	(.1)	(.2)	--
Transition amount amortization	(3.8)	(3.7)	(3.6)	--	--	--
Net periodic benefit cost	\$32.8	\$26.6	\$34.6	\$8.2	\$7.4	\$8.3

The projected benefit obligation, accumulated benefit obligation, and fair value of plan assets for the pension plan with accumulated benefit obligations in excess of plan assets were \$983.0 million, \$763.1 million, and \$626.5 million, respectively, as of 30 September 1998, and \$133.6 million, \$112.9 million, and \$60.3 million, respectively, as of 30 September 1997.

The company has two nonpension postretirement benefit plans. Health care benefits are contributory with contributions adjusted periodically; the life insurance plan is noncontributory. The effect of a change in the health care trend rate is slightly tempered by a cap on average retiree medical cost. A one percentage point change in the assumed health care cost trend rate would have the following effects:

(Millions of dollars)	1 Percentage Point Increase	1 Percentage Point Decrease
Effect on total of service and interest cost	\$ .4	\$ (.5)
Effect on the postretirement benefit obligation	\$3.0	\$(3.5)

In addition to the above plans, U.S. employees are eligible to contribute to a 401(k) plan. The company matches a portion of these contributions. Contributions charged to income for this plan for 1998, 1997, and 1996 were \$12.9 million, \$12.1 million, and \$11.6 million, respectively.

#### 15) LEASES

Capital leases, primarily for machinery and equipment, are included with owned plant and equipment on the balance sheet in the amount of \$46.5 million and \$46.0 million at the end of fiscal 1998 and 1997, respectively. Related amounts of accumulated depreciation are \$11.6 million and \$23.6 million, respectively.

Operating leases, including month-to-month agreements, cost the company \$66.8 million in 1998, \$60.6 million in 1997, and \$50.0 million in 1996.

At 30 September 1998, minimum payments due under leases are as follows:

(Millions of dollars)	Capital Leases	Operating Leases
1999	\$ 9.5	\$ 27.7
2000	7.7	21.8
2001	6.7	15.2
2002	6.1	10.3
2003	5.2	7.0
2004 and thereafter	5.3	78.1
	\$40.5	\$160.1

The present value of the above future capital lease payments is included in the liability section of the balance sheet. At the end of fiscal 1998, \$6.7 million was classified as current and \$25.4 million as long-term.



## 16) OTHER COMMITMENTS AND CONTINGENCIES

General partnerships, in which subsidiaries of Air Products have a 50% interest, own facilities in Stockton, California and Cambria County, Pennsylvania that burn coal and coal waste, respectively, and produce electricity and steam. Air Products is also operator of these projects. Specific performance guarantees obligate Air Products to pay damages up to the following amounts under certain circumstances and if the general partnership is unable to service its debt:

Stockton: Periodic debt service on the outstanding project debt (\$8 million as of 30 September 1998). Average annual debt service over the next five years is \$2 million.

Cambria: Under certain circumstances, if the facility fails to operate as a result of not having fuel available, the outstanding uncollateralized project debt (\$117 million as of 30 September 1998). Otherwise, \$1 million (escalates from October 1989) annually up to a cumulative total of \$17 million.

Additionally, Air Products and a subsidiary have a 50% interest in a limited partnership that owns a natural gas-fired cogeneration facility in Orlando, Florida. Under agreements with the partnership, Air Products provides financial support relating to the facility's natural gas supply. In the event the partnership's municipal utility district customer (one of the project's two power purchasers) terminates its contract due to a partnership default, Air Products will make available up to \$15 million (escalates from February 1992) to compensate the utility district for the higher cost of power procured from other sources over a period of up to 5 years.

In connection with financing of the cogeneration projects, Air Products has contracted to provide financial support in the event of a title problem at the plant site.

Air Products and an equity affiliate effectively own 48.9% of Bangkok Cogeneration Company. Bangkok Cogeneration Company is constructing a cogeneration facility in Thailand and has entered into restructured agreements providing for financings aggregating approximately \$83 million, subject to borrowing caps denominated in Thai baht. Such restructured agreements and the achievement by Bangkok Cogeneration Company of certain milestones have reduced the lenders' recourse against the company to a maximum of \$16 million. Commercial operation is expected to occur in the first half of fiscal 1999.

In addition, the company has guaranteed repayment of borrowings of certain domestic and foreign equity affiliates. At year end, these guarantees totaled approximately \$64 million.

The company has accrued for certain environmental investigatory and noncapital remediation costs consistent with the policy set forth in Note 1. The potential exposure for such costs is estimated to range from \$11 million to a reasonably possible upper exposure of \$29 million. The balance sheet at 30 September 1998 includes an accrual of \$23 million. The company does not expect that any sums it may have to pay in connection with these environmental matters would have a materially adverse effect on its consolidated financial position or results of operations in any one year.

The company in the normal course of business has commitments, lawsuits, contingent liabilities, and claims. However, the company does not expect that any sum it may have to pay in connection with these matters will have a materially adverse effect on its consolidated financial position or results of operations.

At the end of fiscal 1998, the company had purchase commitments to spend approximately \$232 million for additional plant and equipment.



## 17) ACQUISITIONS AND DIVESTITURES

In December 1997, the company sold substantially all of its 50% interest in the American Ref-Fuel Company, its former waste-to-energy joint venture with Browning-Ferris Industries, Inc. (BFI), to a limited liability company formed by Duke Energy Power Services and United American Energy Corporation. This transaction provided for the sale of Air Products' interest in American Ref-Fuel's five waste-to-energy facilities for \$237 million, and Duke Energy Capital Corporation, the parent company of Duke Energy Power Services, assumed various parental support agreements. The income statement for the year ended 30 September 1998 includes a gain of \$62.6 million from this sale (\$35.1 million after-tax or \$.16 per share).

In November 1994, the company published a tender offer to acquire 74.2% of the outstanding shares (9.7 million) of Carbueros Metalicos S.A. (Carbueros), representing all of the shares in Carbueros not owned by the company. The company made a second tender offer in September 1995 and a third tender offer in September 1996. The company acquired less than 1% of the outstanding shares in the initial tender offer while the second tender offer resulted in the acquisition of an additional 21.5% (2.8 million) of the outstanding shares at a cost of \$120.0 million.

On 22 October 1996, the company obtained control of Carbueros through the acquisition of an additional 49.1% (6.4 million) of the outstanding shares at a cost of \$288.4 million. The acquisition was funded through the issuance of U.S. dollar debt effectively converted to Spanish Peseta liabilities through the use of interest rate and currency swap contracts and foreign exchange contracts.

Carbueros is a leading supplier of industrial gases in Spain. This transaction was accounted for as a step acquisition purchase, and the results for the year ended 30 September 1997 contained approximately forty-five weeks of consolidated operating results for Carbueros. Previously, the company accounted for its investment using the equity method. The company has recorded a total of \$212.2 million as cumulative goodwill related to the shares acquired in the three tender offers. The goodwill will be amortized on a straight-line basis over forty years.

In fiscal 1998, the company purchased most of the remaining minority interest in Carbueros. The company now owns 99.4% of the outstanding shares of Carbueros.

## 18) SUBSEQUENT EVENTS

On 1 October 1998, Air Products and Chemicals, Inc. and Wacker-Chemie GmbH formed two joint ventures to consolidate their respective positions in polymer emulsions and redispersible powder polymers businesses. The combined annual sales of the ventures are expected to be approximately \$800 million in fiscal 1999. The ventures extend the company's strategy to continue globalization of the chemicals segment by establishing manufacturing and support facilities in key regions.

The polymer emulsions joint venture, Air Products Polymers, L.P. (APP), is headquartered in the United States and has facilities in Germany, Mexico, Korea, and several locations in the United States. Air Products has a 65% interest in the venture, and Wacker-Chemie has a 35% interest. This venture will be fully consolidated into Air Products' financial statements and the Wacker-Chemie interest accounted for as a minority interest. The accounting for this transaction as a business combination requires the Wacker-Chemie assets be written up to estimated fair value, resulting in a gain on the transfer and the addition of goodwill.

The redispersible powders venture, Wacker Polymer Systems (WPS), is headquartered in Germany, with manufacturing facilities in Germany and the United States. Air Products has a 20% interest in this venture and will report the results by the equity accounting method.

Air Products' fiscal 1999 sales are expected to be approximately \$110 million higher than would be reported without the ventures. After the Wacker-Chemie minority eliminations, net income in the initial year of operation is expected to be approximately the same as without the ventures.

In October 1998, the company's Board of Directors authorized an Air Products stock repurchase plan of up to 25 million shares. The company expects to purchase between \$100 million and \$200 million of Air Products shares in fiscal 1999.

## 19) SUPPLEMENTARY INFORMATION

## Payables, Trade and Other

30 September (Millions of dollars)	1998	1997
Accounts payable, trade	\$398.0	\$468.9
Outstanding checks payable in excess of certain cash balances	23.3	40.2
Customer advances	57.4	107.5
	\$478.7	\$616.6

## Accrued Liabilities

30 September (Millions of dollars)	1998	1997
Accrued payroll and employee benefits	\$109.0	\$ 98.8
Accrued interest expense	45.8	44.7
Other accrued liabilities	178.0	172.2
	\$332.8	\$315.7

## Short-Term Borrowings

30 September (Millions of dollars)	1998	1997
Bank obligations	\$ 28.4	\$ 20.8
Commercial paper	240.2	54.5
Notes payable--other	1.5	25.6
	\$270.1	\$100.9

The weighted average interest rate of short-term commercial paper outstanding as of 30 September 1998 and 1997 was 5.5% and 5.7%, respectively.

## Other Income (Expense), Net

(Millions of dollars)	1998	1997	1996
Interest income	\$5.3	\$ 6.7	\$ 7.3
Foreign exchange	(8.3)	(5.8)	.3
Gain on sale of assets and investments	18.6	25.1	--
Impairment loss of long-lived assets	(2.2)	(9.9)	--
Royalty and technology income	2.6	2.7	1.5
Amortization of intangibles	(16.4)	(14.6)	(10.7)
Technical aid fees	11.4	12.8	13.0
Miscellaneous	3.8	7.2	14.3
	\$14.8	\$24.2	\$25.7

## Additional Income Statement Information

Fiscal 1998 results were increased by net after-tax income of \$58.1 million, or \$.26 per share, for special items. The components of special items on a before- and after-tax basis were: a gain of \$62.6 million (\$35.1 million after-tax, or \$.16 per share) on the sale of substantially all of the company's 50% interest in the American Ref-Fuel Company; a gain of \$28.3 million (\$15.4 million after-tax, or \$.07 per share) from a power contract restructuring related to an American Ref-Fuel project; and a gain of \$12.6 million (\$7.6 million after-tax, or \$.03 per share) from a cogeneration project contract settlement. Additional details of the divestiture of the American Ref-Fuel Company are included in Note 17.

Fiscal 1996 results include a \$66.8 million (\$40.7 million after-tax, or \$.18 per share) settlement with Bankers Trust Company over losses reported in fiscal 1994 associated with leveraged interest rate swap contracts.

## Additional Cash Flow Information

Cash paid for interest and taxes is as follows:

(Millions of dollars)	1998	1997	1996
Interest (net of amounts capitalized)	\$163.1	\$161.5	\$116.6

Taxes (net of refunds)	246.2	89.1	98.9
-----			

Significant noncash transactions are as follows:

(Millions of dollars)	1998	1997	1996
-----			
Capital lease additions	\$5.7	\$3.0	\$4.7
-----			
Debt associated with acquisition	10.0	1.1	5.2
-----			

Summary by Quarter

This table summarizes the unaudited results of operations for each quarter of 1998 and 1997:

(Millions of dollars, except per share)	First	Second	Third	Fourth
1998				
Sales	\$1,234.8	\$1,208.6	\$1,225.3	\$1,250.3
Operating income	212.6	206.1	211.3	215.0
Net income	160.5	120.5	138.1	127.7
Basic earnings per common share(a)	.74	.56	.64	.60
Diluted earnings per common share(a)	.72	.54	.63	.59
Dividends per common share(a)	.15	.15	.17	.17
Price per common share:(a) high	41 21/32	43 7/8	45 11/32	40 1/8
low	36 3/32	37 27/32	38 9/16	29 3/4
1997				
Sales	\$1,120.9	\$1,153.1	\$1,150.3	\$1,213.5
Operating income	169.4	184.0	192.9	179.1
Net income	99.9	106.0	116.0	107.4
Basic earnings per common share(a)	.45	.48	.53	.49
Diluted earnings per common share(a)	.44	.47	.52	.48
Dividends per common share(a)	.1375	.1375	.15	.15
Price per common share:(a) high	35 5/16	38 13/16	42 13/16	44 13/16
low	29	33 1/4	33 3/16	39 13/16

(a) Adjusted for two-for-one stock split in 1998 (Note 9).

Dividends Graph

Market Price Range per Share Graph

## 20) BUSINESS SEGMENT AND GEOGRAPHIC INFORMATION

The company has three business segments that manufacture products or provide services to many different markets.

The company is a leading international supplier of industrial and specialty gas products. Principal products of the industrial gases segment are oxygen, nitrogen, argon, hydrogen, carbon monoxide, carbon dioxide, synthesis gas, and helium. The largest market segments are chemical processing, refining, metal production, electronics, food processing, and medical gases. The company has its strongest market positions in the United States and Europe.

The chemical businesses consist of polymer chemicals, performance chemicals, and chemical intermediates. Polymer chemicals include polymer emulsions, pressure-sensitive adhesives, and polyvinyl alcohol. Principal products of performance chemicals are specialty additives, polyurethane additives, and epoxy additives. Principal chemical intermediates are amines and polyurethane intermediates. The company also produces certain industrial chemicals. The end markets for the company's chemical products are extensive, including adhesive, textile, paper, building products, agriculture, and furniture. Principal geographic markets for the company's chemical products are North America, Europe, Asia, Brazil, and Mexico.

The equipment and services segment designs and manufactures cryogenic and gas processing equipment for air separation, gas processing, natural gas liquefaction, and hydrogen purification. The segment also designs and builds systems for recovering gases using membrane technology. The equipment is sold along with a broad range of plant design, engineering, and operating services for the company's power generation and Pure Air™ flue gas treatment facilities. Equipment is sold worldwide to companies involved in chemical and petrochemical manufacturing, oil and gas recovery and processing, power generation, and steel and primary metal production. Equipment is also manufactured for the company's industrial gas business. Another important market, particularly for air separation equipment, is the company's international industrial gas joint ventures.

1998 Sales by Business Segment Graph

1998 Sales by Geography Graph

Business segment information is shown below:

(Millions of dollars)	Industrial Gases	Chemicals	Equipment and Services	Corporate and Other	Total
1998					
Sales	\$2,907.5	\$1,539.2	\$472.3	\$--	\$4,919.0
Operating income	573.1	253.7	73.1	(54.9)	845.0
Equity affiliates' income	17.3	.6	17.7	2.4	38.0
Identifiable assets	5,117.5	1,530.3	260.9	218.9	7,127.6
Investment in and advances to equity affiliates	322.3	2.4	37.3	--	362.0
Depreciation	375.3	105.2	7.5	1.4	489.4
Additions to plant and equipment	554.9	195.2	5.2	15.6	770.9
1997					
Sales	\$2,673.9	\$1,448.1	\$514.6	\$1.2	\$4,637.8
Operating income	515.2	204.2	37.5	(31.5)	725.4
Equity affiliates' income	28.5	.4	13.9	23.5	66.3
Identifiable assets	4,721.6	1,271.5	440.1	255.2	6,688.4
Investment in and advances to equity affiliates	314.6	2.4	26.0	212.7	555.7
Depreciation	347.0	102.7	7.2	2.2	459.1
Additions to plant and equipment	696.0	152.6	1.7	19.9	870.2
1996					
Sales	\$2,310.5	\$1,362.3	\$314.6	\$20.3	\$4,007.7
Operating income	406.7	197.5	32.7	(45.6)	591.3
Equity affiliates' income	44.0	.3	8.5	27.9	80.7
Identifiable assets	3,923.3	1,225.5	345.6	268.6	5,763.0
Investment in and advances to equity affiliates	524.3	2.6	19.5	213.0	759.4
Depreciation	298.1	97.5	6.7	9.8	412.1
Additions to plant and equipment	745.9	171.7	14.1	19.6	951.3

Notes: Corporate and other operating income includes unallocated corporate expenses and income and foreign exchange gains and losses. Corporate and other identifiable assets include cash and cash items, unallocated administrative facilities, and certain deferred items.

Identifiable assets exclude the investment in and advances to equity affiliates.

Sales are to unconsolidated customers. Sales between segments, excluding transfers of products at cost, are not material. Products transferred at cost consist primarily of air separation plants and distribution equipment manufactured by the equipment and services segment for use by the industrial gases segment. These transfers amounted to \$387.0 million, \$559.0 million, and \$636.8 million in 1998, 1997, and 1996, respectively.

Geographic information is presented below:

(Millions of dollars)	United States	Europe	Canada and Latin America	Other	Total
1998					
Sales: Industrial Gases	\$1,674.8	\$1,065.1	\$153.5	\$14.1	\$2,907.5
Chemicals	1,383.7	78.9	63.1	13.5	1,539.2
Equipment and Services	323.0	149.3	--	--	472.3
Corporate and Other	--	--	--	--	--
Total	3,381.5	1,293.3	216.6	27.6	4,919.0
Operating income	635.4	192.8	19.9	(3.1)	845.0
Equity affiliates' income	19.0	15.0	11.2	(7.2)	38.0
Identifiable assets	4,265.6	2,302.2	329.7	230.1	7,127.6
Investment in and advances to equity affiliates	57.7	117.0	77.4	109.9	362.0
1997					
Sales: Industrial Gases	\$1,589.9	\$ 939.1	\$138.1	\$ 6.8	\$2,673.9
Chemicals	1,357.7	45.5	33.6	11.3	1,448.1
Equipment and Services	320.9	193.7	--	--	514.6
Corporate and Other	1.2	--	--	--	1.2
Total	3,269.7	1,178.3	171.7	18.1	4,637.8
Operating income	554.3	150.8	20.9	(0.6)	725.4
Equity affiliates' income	36.5	13.9	11.2	4.7	66.3
Identifiable assets	4,164.6	2,033.1	300.4	190.3	6,688.4
Investment in and advances to equity affiliates	256.3	95.7	73.9	129.8	555.7
1996					
Sales: Industrial Gases	\$1,477.8	\$ 697.7	\$133.3	\$ 1.7	\$2,310.5
Chemicals	1,282.5	56.3	9.4	14.1	1,362.3
Equipment and Services	236.5	78.1	--	--	314.6
Corporate and Other	20.3	--	--	--	20.3
Total	3,017.1	832.1	142.7	15.8	4,007.7
Operating income	460.8	115.5	14.5	0.5	591.3
Equity affiliates' income	35.5	24.0	7.9	13.3	80.7
Identifiable assets	3,992.7	1,411.8	224.4	134.1	5,763.0
Investment in and advances to equity affiliates	249.9	324.3	71.0	114.2	759.4

Notes: Included in United States sales are export sales to unconsolidated customers of \$649.6 million in 1998, \$570.7 million in 1997, and \$459.0 million in 1996. The Europe segment operates principally in the United Kingdom, France, Germany, Netherlands, Spain, and Belgium. Equity affiliates' income and investment in and advances to equity affiliates included under Other relates to the company's equity affiliates in Asia and South Africa.

ELEVEN-YEAR SUMMARY OF SELECTED FINANCIAL DATA

(Millions of dollars, except per share)	1998	1997	1996
<b>Operating Results</b>			
Sales	\$4,919	\$4,638	\$4,008
Cost of sales	2,857	2,772	2,408
Selling, distribution, and administrative	1,120	1,051	920
Research and development	112	114	114
Workforce reduction and asset write-downs	--	--	--
Operating income	845	725	591
Equity affiliates' income(a)	38	66	80
(Settlement)/Loss on leveraged interest rate swaps	--	--	(67)
Interest expense	163	161	129
Income taxes	277	201	193
Income from continuing operations	547	429	416(b)
Net income	547	429	416(b)
Basic Earnings per common share:(g)			
Continuing operations	2.54	1.95	1.86(b)
Net income	2.54	1.95	1.86(b)
Diluted Earnings per common share:(g)			
Continuing operations	2.48	1.91	1.83
Net income	2.48	1.91	1.83
<b>Year-End Financial Position</b>			
Plant and equipment, at cost	\$9,490	\$8,727	\$8,103
Total assets	7,490	7,244	6,522
Working capital	376	500	111
Long-term debt	2,274	2,292	1,739
Shareholders' equity	2,667	2,648	2,574
<b>Financial Ratios</b>			
Return on sales(h)	11.1%	9.3%	10.4%
Return on average shareholders' equity(h)	20.8%	16.6%	16.6%
Total debt to sum of total debt and shareholders' equity(i)	50.3%	48.2%	46.0%
Cash provided by operations to average total debt(i)	38.6%	40.9%	38.5%
Interest coverage ratio	5.5	4.4	5.1
<b>Other Data</b>			
For the year: Depreciation	\$489	\$459	\$412
Capital expenditures(k)	1,001	1,222	1,164
Cash dividends per common share(g)	.64	.58	.53
Market price range per common share(g)	45-29	44-29	30-24
Average common shares outstanding (millions)	216	220	223
Average common shares and common stock equivalent shares outstanding (millions)	220	225	227
At year end: Book value per common share(g)	12.61	12.05	11.65
Shareholders	11,500	11,200	11,700
Employees	16,700	16,400	15,200

(a) Includes related expenses and gain on sale of investment in equity affiliates. Excludes the gain on the sale of the American Ref-Fuel Company in 1998.

(b) Includes an after-tax gain of \$41 million, or \$.18 per share, from a



settlement associated with leveraged interest rate swap contracts.

- (c) Includes a charge of \$75 million, or \$.33 per share, for a loss on certain derivative contracts.
- (d) Includes a charge of \$76 million, or \$.34 per share, for workforce reduction and asset write-downs.
- (e) Includes a charge of \$75 million, or \$.33 per share, for a loss on certain derivative contracts and a net gain of \$14 million, or \$.06 per share, for the cumulative effect of accounting changes.
- (f) Net income for fiscal 1992 includes an extraordinary charge of \$6 million, or \$.03 per share, for the early retirement of debt.

1995	1994	1993	1992	1991	1990	1989	1988
\$3,865	\$3,485	\$3,328	\$3,217	\$2,931	\$2,895	\$2,642	\$2,432
2,317	2,112	2,030	1,937	1,755	1,775	1,601	1,452
869	789	744	724	686	659	610	545
103	97	92	85	80	72	71	72
--	--	120	--	--	--	--	--
602	486	369	481	435	399	382	374
51	28	13	16	13	17	9	(8)
--	107	--	--	--	--	--	--
100	81	81	90	86	83	73	65
185	92	100	130	113	103	96	87
368	234(c)	201(d)	277	249	230	222	214
368	248(e)	201(d)	271(f)	249	230	222	214
1.64	1.03(c)	.88(d)	1.23	1.11	1.04	1.01	.97
1.64	1.09(e)	.88(d)	1.20(f)	1.11	1.04	1.01	.97
1.62	1.01	.87	1.20	1.09	1.02	.99	.95
1.62	1.07	.87	1.17	1.09	1.02	.99	.95
\$7,350	\$6,520	\$5,953	\$5,785	\$5,332	\$5,010	\$4,442	\$4,085
5,816	5,036	4,761	4,492	4,228	3,900	3,366	3,000
21	101	322	279	117	214	262	110
1,194	923	1,016	956	945	954	854	668
2,398	2,206	2,102	2,098	1,841	1,688	1,445	1,272
9.5%	6.7%	6.0%	8.6%	8.5%	7.9%	8.4%	8.8%
16.1%	10.9%	9.6%	14.0%	14.1%	14.7%	16.4%	17.6%
41.2%	36.0%	37.3%	33.9%	38.1%	38.5%	38.4%	37.6%
48.6%	59.5%	50.3%	52.7%	57.7%	52.7%	53.7%	65.4%
5.5	4.5	4.4	5.4	4.2	4.2	4.6	4.9
\$382	\$353	\$346(j)	\$340	\$319	\$303	\$281	\$258
969	655	666	485	657	621	562	556
.51	.47	.45	.41	.38	.35	.32	.28
29-21	25-19	25-18	25-15	18-10	15-11	12-9	13-7
224	227	228	226	224	222	220	219
228	231	232	231	228	226	224	225
10.74	9.73	9.21	9.25	8.20	7.58	6.56	5.80
11,800	11,900	11,800	11,100	10,900	11,100	11,400	11,900
14,800	14,100	15,300	14,500	14,600	14,000	14,100	13,300

(g) Data per common share are based on the average number of shares outstanding during each year retroactively restated to reflect a two-for-one stock split in 1998 and 1992, except for book value per common share, which is based on the number of shares outstanding at the end of each year retroactively restated.

(h) Financial ratios were calculated using income from continuing operations.

(i) Total debt includes long-term debt, current portion of long-term debt, and short-term borrowings as of the end of the year.

(j) Depreciation expense in 1993 excludes \$56 million associated with asset write-downs.

(k) Capital expenditures include additions to plant and equipment, investment in and advances to unconsolidated affiliates, acquisitions, and capital lease additions.

## SUBSIDIARIES OF AIR PRODUCTS AND CHEMICALS, INC.

The following is a list of the Company's subsidiaries, all of which are wholly owned as of 30 September 1998, except for certain subsidiaries of the Registrant which do not in the aggregate constitute a significant subsidiary as that term is defined in Rule 12b-2 under the Securities Exchange Act of 1934.

## UNITED STATES

All companies are incorporated in the State of Delaware with the exception of Air Products World Trade, Inc. which is incorporated in the U.S. Virgin Islands.

Registrant -- Air Products and Chemicals, Inc.  
 Air Products Helium, Inc.  
 Air Products Hydrogen Company, Inc.  
 Air Products, Incorporated  
 Air Products International Corporation  
 Air Products Manufacturing Corporation  
 Air Products Ref-fuel of Hempstead, Inc.  
 Air Products Ref-Fuel of Niagara, Inc.  
 Air Products World Trade, Inc.  
 APCI (U.K.), Inc.  
 Middletown Oxygen Company, Inc.  
 Permea, Inc.  
 Prodair Corporation  
 Solkatronic Chemicals, Inc.

## BELGIUM

Air Products S.A.  
 Air Products Management S.A.

## BRAZIL

Air Products Gases Industriais Ltda. (The organization of this affiliate more closely resembles a partnership with limited liability than a corporation.)

## CANADA

Air Products Canada Ltd.

## CHINA

Northern Air Products (Tianjin) Limited  
 Southern Air Products (Guangzhou) Limited

## FRANCE

Air Products Industrie  
 Air Products S.A.  
 Prodair et Cie S.C.S.  
 Prodair S.A.

## GERMANY

Air Products GmbH

## THE NETHERLANDS

Air Products Holdings B.V. (formerly Air Products Nederland B.V.)  
 Air Products Leasing B.V.  
 Air Products (Pernis) B.V.  
 Air Products (Rozenburg), Inc.

## SPAIN

Air Products Iberica, S.A.  
 S.E. de Carbuos Metalicos S.A.

## SINGAPORE

Air Products Singapore Pte. Ltd.

## UNITED KINGDOM

Air Products PLC  
 Air Products Group Limited  
 Air Products (BR) Limited  
 Air Products (Chemicals) PLC  
 Air Products (Chemicals) Teeside Limited

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Harold A. Wagner or Leo J. Daley or James H. Agger, acting severally, his/her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him/her and in his/her name, place and stead, in any and all capacities, to sign the Form 10-K Annual Report for the fiscal year ended September 30, 1998 and all amendments thereto and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he/she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities and Exchange Act of 1934, this Power of Attorney has been signed below by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Harold A. Wagner ----- Harold A. Wagner	Director and Chairman of the Board (Principal Executive Officer)	November 19, 1998
/s/ John P. Jones III ----- John P. Jones III	Director	November 19, 1998
/s/ Joseph J. Kaminski ----- Joseph J. Kaminski	Director	November 19, 1998
/s/ Tom H. Barrett ----- Tom H. Barrett	Director	November 19, 1998
/s/ L. Paul Bremer, III ----- L. Paul Bremer, III	Director	November 19, 1998
/s/ Robert Cizik ----- Robert Cizik	Director	November 19, 1998
/s/ Ruth M. Davis ----- Ruth M. Davis	Director	November 19, 1998
/s/ Ursula F. Fairbairn ----- Ursula F. Fairbairn	Director	November 19, 1998
/s/ Edward E. Hagenlocker ----- Edward E. Hagenlocker	Director	November 19, 1998
/s/ James F. Hardymon ----- James F. Hardymon	Director	November 19, 1998
/s/ Terry R. Lautenbach ----- Terry R. Lautenbach	Director	November 19, 1998
/s/ Rudolphus F. M. Lubbers ----- Rudolphus F. M. Lubbers	Director	November 19, 1998
/s/ Takeo Shiina ----- Takeo Shiina	Director	November 19, 1998

/s/ Lawrason D. Thomas

Director

November 19, 1998

-----  
Lawrason D. Thomas

This Schedule contains summary financial information extracted from the consolidated balance sheet and the consolidated statement of income filed as part of Form 10-K and is qualified in its entirety by reference to such Form 10-K

1,000,000  
US DOLLARS

YEAR	SEP-30-1998	OCT-01-1997	SEP-30-1998
		1	62
		0	898
		17	429
	1642		9489
	4703		
	7490		
	1266		2274
	0		0
			249
7490			2418
			4919
	4919		2856
	2856		
	112		
	6		
	163		
	824		
	277		
547			
	0		
	0		
			0
	547		
	2.54		
	2.48		