

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

-----  
FORM 10-Q

(Mark One)

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

For the quarterly period ended 31 March 2004

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 1-4534

AIR PRODUCTS AND CHEMICALS, INC.  
(Exact Name of Registrant as Specified in Its Charter)

Delaware  
(State or Other Jurisdiction of Incorporation or Organization)

23-1274455  
(I.R.S. Employer Identification No.)

7201 Hamilton Boulevard, Allentown, Pennsylvania  
(Address of Principal Executive Offices)

18195-1501  
(Zip Code)

610-481-4911  
(Registrant's Telephone Number, Including Area Code)

Not Applicable  
(Former Name, Former Address and Former Fiscal Year, if Changed Since Last  
Report)

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

Indicate by check mark whether the registrant is an accelerated filer  
(as defined in Rule 12b-2 of the Exchange Act). Yes  No

Indicate the number of shares outstanding of each of the issuer's  
classes of common stock, as of the latest practicable date.

Class	Outstanding at 7 May 2004
----- Common Stock, \$1 par value	----- 227,291,877

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES  
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BASIS OF PRESENTATION:

The consolidated financial statements of Air Products and Chemicals, Inc. and its subsidiaries (the "company" or "registrant") included herein have been prepared by the company, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission. Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted pursuant to such rules and regulations. In the opinion of the company, the accompanying statements reflect adjustments necessary to present fairly the financial position, results of operations and cash flows for those periods indicated, and contain adequate disclosure to make the information presented not misleading. Adjustments included herein are of a normal, recurring nature unless otherwise disclosed in the notes to consolidated financial statements. However, the interim results for the periods indicated herein do not reflect certain adjustments, such as the valuation of inventories on the LIFO cost basis, which can only be finally determined on an annual basis. The consolidated financial statements included herein should be read in conjunction with the financial statements and notes thereto included in the company's latest annual report on Form 10-K in order to fully understand the basis of presentation.

Results of operations for interim periods are not necessarily indicative of the results of operations for a full year. Reference the 2004 Outlook included on pages 29-30 of Item 2 in Management's Discussion and Analysis of Financial Condition and Results of Operations. Risk factors that could impact results are discussed under Forward-Looking Statements on page 34.

## PART I. FINANCIAL INFORMATION

## ITEM 1. FINANCIAL STATEMENTS

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES  
CONSOLIDATED BALANCE SHEETS  
(UNAUDITED)

(Millions of dollars, except share and per share)

	31 March 2004	30 September 2003
	-----	-----
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash items	\$ 142.3	\$ 76.2
Trade receivables, less allowances for doubtful accounts	1,354.9	1,188.5
Inventories	528.9	483.1
Contracts in progress, less progress billings	34.4	82.8
Other current assets	265.0	237.3
	-----	-----
<b>TOTAL CURRENT ASSETS</b>	<b>2,325.5</b>	<b>2,067.9</b>
	-----	-----
<b>INVESTMENTS IN NET ASSETS OF AND ADVANCES TO EQUITY AFFILIATES</b>		
	601.8	553.5
<b>PLANT AND EQUIPMENT, at cost</b>	<b>12,000.5</b>	<b>11,723.2</b>
Less accumulated depreciation	6,284.7	6,086.1
	-----	-----
<b>PLANT AND EQUIPMENT, net</b>	<b>5,715.8</b>	<b>5,637.1</b>
	-----	-----
<b>GOODWILL</b>	<b>792.2</b>	<b>725.8</b>
<b>INTANGIBLE ASSETS, net</b>	<b>108.7</b>	<b>104.1</b>
<b>OTHER NONCURRENT ASSETS</b>	<b>418.5</b>	<b>343.5</b>
	-----	-----
<b>TOTAL ASSETS</b>	<b>\$ 9,962.5</b>	<b>\$ 9,431.9</b>
	=====	=====
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Payables and accrued liabilities	\$ 1,173.8	\$ 1,123.5
Accrued income taxes	73.1	115.6
Short-term borrowings	144.3	165.7
Current portion of long-term debt	508.4	176.4
	-----	-----
<b>TOTAL CURRENT LIABILITIES</b>	<b>1,899.6</b>	<b>1,581.2</b>
	-----	-----
<b>LONG-TERM DEBT</b>		
	2,001.5	2,168.6
<b>DEFERRED INCOME &amp; OTHER NONCURRENT LIABILITIES</b>	<b>994.9</b>	<b>1,005.9</b>
<b>DEFERRED INCOME TAXES</b>	<b>739.5</b>	<b>705.6</b>
	-----	-----
<b>TOTAL LIABILITIES</b>	<b>5,635.5</b>	<b>5,461.3</b>
	-----	-----
<b>MINORITY INTEREST IN SUBSIDIARY COMPANIES</b>		
	186.0	188.1
	-----	-----
<b>SHAREHOLDERS' EQUITY</b>		
Common stock (par value \$1 per share, issued 2004 and 2003-249,455,584 shares)	249.4	249.4
Capital in excess of par value	541.0	493.9
Retained earnings	4,686.7	4,516.6
Accumulated other comprehensive income (loss)	(490.0)	(567.2)
Treasury stock, at cost (2004 - 22,172,010 shares; 2003 - 22,189,714 shares)	(765.5)	(766.1)
Shares in trust (2004 - 3,202,090 shares; 2003 - 5,842,391 shares)	(80.6)	(144.1)
	-----	-----
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>4,141.0</b>	<b>3,782.5</b>
	-----	-----
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>	<b>\$ 9,962.5</b>	<b>\$ 9,431.9</b>
	=====	=====

The accompanying notes are an integral part of these statements.

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES  
CONSOLIDATED INCOME STATEMENTS  
(UNAUDITED)

(Millions of dollars, except per share)

	Three Months Ended 31 March		Six Months Ended 31 March	
	2004	2003	2004	2003
SALES	\$ 1,856.5	\$ 1,578.1	\$ 3,541.4	\$ 3,025.1
COSTS AND EXPENSES				
Cost of sales	1,369.6	1,176.3	2,599.8	2,209.3
Selling and administrative	250.4	206.6	481.8	399.9
Research and development	32.0	31.1	62.0	61.1
Global cost reduction plans, net	--	(.2)	--	(.2)
Other (income) expense, net	(5.6)	(12.0)	(11.1)	(15.3)
OPERATING INCOME	210.1	176.3	408.9	370.3
Equity affiliates' income	22.0	15.2	41.6	43.5
Interest expense	32.3	28.6	63.2	60.3
INCOME BEFORE TAXES AND MINORITY INTEREST	199.8	162.9	387.3	353.5
Income taxes	54.9	48.7	106.2	103.8
Minority interest (a)	3.7	.6	8.1	7.4
INCOME BEFORE CUMULATIVE EFFECT OF ACCOUNTING CHANGE	141.2	113.6	273.0	242.3
Cumulative effect of accounting change	--	--	--	(2.9)
NET INCOME	\$ 141.2	\$ 113.6	\$ 273.0	\$ 239.4
BASIC EARNINGS PER COMMON SHARE				
Income before cumulative effect of accounting change	\$ .63	\$ .52	\$ 1.23	\$ 1.11
Cumulative effect of accounting change	--	--	--	(.02)
Net Income	\$ .63	\$ .52	\$ 1.23	\$ 1.09
DILUTED EARNINGS PER COMMON SHARE				
Income before cumulative effect of accounting change	\$ .62	\$ .51	\$ 1.20	\$ 1.09
Cumulative effect of accounting change	--	--	--	(.02)
Net Income	\$ .62	\$ .51	\$ 1.20	\$ 1.07
WEIGHTED AVERAGE OF COMMON SHARES OUTSTANDING (in millions)	223.7	219.2	222.8	219.0
WEIGHTED AVERAGE OF COMMON SHARES OUTSTANDING ASSUMING DILUTION (in millions)	228.8	222.5	227.9	222.7
DIVIDENDS DECLARED PER COMMON SHARE - Cash	\$ .23	\$ .21	\$ .46	\$ .42

(a) Minority interest primarily includes before-tax amounts.

The accompanying notes are an integral part of these statements.

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES  
CONSOLIDATED COMPREHENSIVE INCOME STATEMENTS  
(UNAUDITED)

(Millions of dollars)

	Three Months Ended 31 March		Six Months Ended 31 March	
	2004	2003	2004	2003
	-----	-----	-----	-----
NET INCOME	\$ 141.2	\$ 113.6	\$ 273.0	\$ 239.4
OTHER COMPREHENSIVE INCOME, net of tax				
Investments:				
Unrealized holding gains (losses)				
arising during the period	5.6	(.5)	5.7	.9
Less: reclassification to net income	--	--	--	--
	-----	-----	-----	-----
Net unrealized holding gain (loss) on investments	5.6	(.5)	5.7	.9
Derivatives qualifying as hedges:				
Unrecognized gains (losses)				
arising during the period	(1.5)	.3	(8.4)	(.3)
Less: reclassification to net income	3.1	(4.1)	8.9	(4.0)
	-----	-----	-----	-----
Net unrecognized gain (loss) on derivatives	1.6	(3.8)	.5	(4.3)
Foreign currency translation adjustments	14.6	3.6	71.0	45.4
	-----	-----	-----	-----
TOTAL OTHER COMPREHENSIVE INCOME	21.8	(.7)	77.2	42.0
	-----	-----	-----	-----
COMPREHENSIVE INCOME	\$ 163.0	\$ 112.9	\$ 350.2	\$ 281.4
	=====	=====	=====	=====

The accompanying notes are an integral part of these statements.

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
(UNAUDITED)

(Millions of dollars)

	Six Months Ended 31 March	
	2004	2003
<b>OPERATING ACTIVITIES</b>		
Net Income	\$ 273.0	\$ 239.4
Adjustments to reconcile income to cash provided by operating activities:		
Depreciation	347.2	312.4
Deferred income taxes	39.9	25.1
Undistributed earnings of unconsolidated affiliates	(25.6)	(2.2)
Gain on sale of assets and investments	--	(8.9)
Other	36.5	1.9
	671.0	567.7
Working capital changes that provided (used) cash, excluding effects of acquisitions and divestitures:		
Trade receivables	(131.3)	(69.9)
Inventories and contracts in progress	(10.4)	(33.6)
Payables and accrued liabilities (a)	(81.8)	(53.1)
Other	(75.5)	29.0
	372.0	440.1
<b>CASH PROVIDED BY OPERATING ACTIVITIES</b>	<b>372.0</b>	<b>440.1</b>
<b>INVESTING ACTIVITIES</b>		
Additions to plant and equipment (b)	(327.7)	(294.1)
Investment in and advances to unconsolidated affiliates	(3.9)	(5.2)
Acquisitions, less cash acquired (c)	(44.8)	(233.8)
Proceeds from sale of assets and investments	9.3	40.0
Other	(.5)	(1.0)
	(367.6)	(494.1)
<b>CASH USED FOR INVESTING ACTIVITIES</b>	<b>(367.6)</b>	<b>(494.1)</b>
<b>FINANCING ACTIVITIES</b>		
Long-term debt proceeds	147.3	50.2
Payments on long-term debt	(152.3)	(60.2)
Net increase (decrease) in commercial paper and other short-term borrowings	74.0	(54.4)
Dividends paid to shareholders	(102.2)	(91.9)
Issuance of stock for options and award plans	89.4	24.6
	56.2	(131.7)
<b>CASH PROVIDED BY (USED FOR) FINANCING ACTIVITIES</b>	<b>56.2</b>	<b>(131.7)</b>
Effect of Exchange Rate Changes on Cash	5.5	5.4
	66.1	(180.3)
Increase (Decrease) in Cash and Cash Items	66.1	(180.3)
Cash and Cash Items - Beginning of Year	76.2	253.7
	\$ 142.3	\$ 73.4
Cash and Cash Items - End of Period	\$ 142.3	\$ 73.4
	=====	=====

(a) Pension plan contributions in 2004 and 2003 were \$190.5 and \$17.8, respectively.

(b) Excludes capital lease additions of \$2.9 and \$1.6 in 2004 and 2003, respectively.

(c) Excludes \$1.0 of capital lease obligations and \$4.0 of long-term debt assumed in acquisitions in 2003.

The accompanying notes are an integral part of these statements.

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES  
SUMMARY BY BUSINESS SEGMENTS  
(UNAUDITED)

(Millions of dollars)

	Three Months Ended 31 March		Six Months Ended 31 March	
	2004	2003	2004	2003
Revenues from external customers				
Gases	\$ 1,284.9	\$ 1,129.5	\$ 2,488.4	\$ 2,155.3
Chemicals	482.7	398.5	892.8	752.3
Equipment	88.9	50.1	160.2	117.5
Segment Totals	1,856.5	1,578.1	3,541.4	3,025.1
Consolidated Totals	\$ 1,856.5	\$ 1,578.1	\$ 3,541.4	\$ 3,025.1
Operating income				
Gases	\$ 189.4	\$ 150.2	\$ 371.7	\$ 318.2
Chemicals	34.7	33.7	59.2	66.8
Equipment	(.2)	3.0	(.5)	7.1
Segment Totals	223.9	186.9	430.4	392.1
Corporate research and development and other income (expense)	(13.8)	(10.6)	(21.5)	(21.8)
Consolidated Totals	\$ 210.1	\$ 176.3	\$ 408.9	\$ 370.3
Equity affiliates' income				
Gases	\$ 19.0	\$ 14.6	\$ 36.7	\$ 31.8
Chemicals	2.9	.8	4.8	3.3
Equipment	.1	(.2)	.1	.1
Segment Totals	22.0	15.2	41.6	35.2
Other	--	--	--	8.3
Consolidated Totals	\$ 22.0	\$ 15.2	\$ 41.6	\$ 43.5

(Millions of dollars)

	31 March 2004	30 September 2003
Identifiable assets (a)		
Gases	\$7,250.8	\$7,097.3
Chemicals	1,412.9	1,478.1
Equipment	212.7	171.4
Segment Totals	8,876.4	8,746.8
Corporate assets	484.3	131.6
Consolidated Totals	\$9,360.7	\$8,878.4

(a) Identifiable assets are equal to total assets less investments in equity affiliates.

AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES  
SUMMARY BY GEOGRAPHIC REGIONS  
(UNAUDITED)

(Millions of dollars)

	Three Months Ended 31 March		Six Months Ended 31 March	
	2004	2003	2004	2003
Revenues from external customers				
United States	\$ 1,043.1	\$ 941.5	\$ 1,986.3	\$ 1,761.4
Canada	21.5	30.1	41.1	57.3
Total North America	1,064.6	971.6	2,027.4	1,818.7
United Kingdom	178.2	112.3	325.6	229.1
Spain	108.1	88.9	213.1	173.3
Other Europe	282.6	234.7	536.9	441.1
Total Europe	568.9	435.9	1,075.6	843.5
Asia	181.3	145.6	353.1	306.0
Latin America	41.7	24.9	85.3	56.7
All Other	--	.1	--	.2
Total	\$ 1,856.5	\$ 1,578.1	\$ 3,541.4	\$ 3,025.1

Note: Geographic information is based on country of origin. The Other Europe segment operates principally in Belgium, France, Germany, and the Netherlands. The Asia segment operates principally in China, Japan, Korea, and Taiwan.



AIR PRODUCTS AND CHEMICALS, INC. AND SUBSIDIARIES  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Millions of dollars, except per share)

MAJOR ACCOUNTING POLICIES

Refer to the company's 2003 annual report on Form 10-K for a description of major accounting policies. There have been no material changes to these accounting policies during 2004.

STOCK-BASED COMPENSATION

At 31 March 2004, the company had various stock-based compensation plans as described in Note 14 to the consolidated financial statements in the company's 2003 annual report on Form 10-K. The company accounts for its stock option plans under the recognition and measurement principles of APB Opinion No. 25, "Accounting for Stock Issued to Employees," and related Interpretations. No compensation expense has been recognized in net income for stock options, as options granted had an exercise price equal to the market value of the underlying common stock on the date of grant. The following table illustrates the effect on net income and earnings per share if the company had applied the fair value recognition provisions of Statement of Financial Accounting Standard (SFAS) No. 123, "Accounting for Stock-Based Compensation," to its stock option plans.

	Three Months Ended 31 March		Six Months Ended 31 March	
	2004	2003	2004	2003
	-----	-----	-----	-----
Net income, as reported	\$ 141.2	\$ 113.6	\$ 273.0	\$ 239.4
Deduct total stock option employee compensation expense determined under fair value based method, net of related tax effects	(7.6)	(9.5)	(15.1)	(18.9)
	-----	-----	-----	-----
Pro forma net income	\$ 133.6	\$ 104.1	\$ 257.9	\$ 220.5
	-----	-----	-----	-----
Basic Earnings per Share				
As reported	\$ .63	\$ .52	\$ 1.23	\$ 1.09
Pro forma	\$ .60	\$ .47	\$ 1.16	\$ 1.01
	-----	-----	-----	-----
Diluted Earnings per Share				
As reported	\$ .62	\$ .51	\$ 1.20	\$ 1.07
Pro forma	\$ .58	\$ .47	\$ 1.13	\$ .99
	-----	-----	-----	-----

NEW ACCOUNTING STANDARDS

In December 2003, the Financial Accounting Standards Board (FASB) published a revision to Interpretation No. 46, "Consolidation of Variable Interest Entities," to clarify some of the provisions of Interpretation No. 46. The revision to Interpretation No. 46 does not change the company's determination that the company has no interests in a variable interest entity.

In December 2003, the FASB also issued a revised SFAS No. 132, "Employers' Disclosures about Pensions and Other Postretirement Benefits," which added disclosure requirements for defined benefit plans. The annual disclosure requirements are effective for the company's fiscal year ending 2004. The disclosures provided by the company in its 2003 annual report on Form 10-K complied with most of the annual disclosure requirements of the new Statement. In its 2004 annual report, the company will enhance its disclosure of investment strategies and the basis for determining the long-term rate of return on plan assets assumption. Also, the company will provide information related to the amount and timing of expected future benefit payments. Under SFAS No. 132, companies are also now required to report the various elements of pension benefit costs on a quarterly basis. The quarterly disclosure requirements were effective beginning the second quarter of fiscal year 2004, and the company has included the required interim disclosures under Pension and Other Postretirement Benefits below.

In January 2004, the FASB issued a FASB Staff Position (FSP) No. FAS 106-1, "Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (Act)." This new FSP permits recognition or deferral of the effects of the prescription-drug provisions of the Act in current financial statements. The specific authoritative guidance on accounting for the federal subsidy provision of the Act is pending and the issued guidance could require a change to previously reported information. The impact of the Act on the company's postretirement medical benefits is not material.

#### EQUITY AFFILIATES' INCOME

Income from equity affiliates for the six months ended 31 March 2003 included \$14 for adjustments related to divestitures recorded in prior periods. \$8 is included in other equity affiliates and \$6 is included in Gases equity affiliates.

#### GLOBAL COST REDUCTION PLAN

The following table summarizes changes to the carrying amount of the accrual for the 2003 global cost reduction plan for the six months ended 31 March 2004:

	Severance -----	Other (1) -----	Total -----
Balance as of 30 September 2003	\$ 38.6	\$ 4.1	\$ 42.7
Cash expenditures	(15.9)	(1.7)	(17.6)
Balance as of 31 March 2004	\$ 22.7	\$ 2.4	\$ 25.1

(1) Asset impairments and related expenses are included in the other category.

#### GOODWILL

Changes to the carrying amount of consolidated goodwill by segment for the six months ended 31 March 2004, are as follows:

	Gases -----	Chemicals -----	Equipment -----	Total -----
Balance as of 30 September 2003	\$619.2	\$96.9	\$9.7	\$725.8
Acquisitions and adjustments	41.6	(1.1)	--	40.5
Currency translation	22.9	2.8	.2	25.9
Balance as of 31 March 2004	\$683.7	\$98.6	\$9.9	\$792.2

The increase in goodwill from acquisitions was principally due to the acquisition of two small U.S. homecare businesses and a 4% increase in ownership of San Fu Gas Company, Ltd.

## EARNINGS PER SHARE

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

	Three Months Ended 31 March		Six Months Ended 31 March	
	2004	2003	2004	2003
NUMERATOR				
Used in basic and diluted EPS				
Income before cumulative effect of accounting change	\$ 141.2	\$ 113.6	\$ 273.0	\$ 242.3
Cumulative effect of accounting change	--	--	--	(2.9)
Net income	\$ 141.2	\$ 113.6	\$ 273.0	\$ 239.4
DENOMINATOR (in millions)				
Weighted average number of common shares used in basic EPS				
	223.7	219.2	222.8	219.0
Effect of dilutive securities				
Employee stock options	4.6	2.8	4.5	3.2
Other award plans	.5	.5	.6	.5
	5.1	3.3	5.1	3.7
Weighted average number of common shares and dilutive potential common shares used in diluted EPS				
	228.8	222.5	227.9	222.7
BASIC EPS				
Income before cumulative effect of accounting change				
	\$ .63	\$ .52	\$ 1.23	\$ 1.11
Cumulative effect of accounting change	--	--	--	(.02)
Net income	\$ .63	\$ .52	\$ 1.23	\$ 1.09
DILUTED EPS				
Income before cumulative effect of accounting change				
	\$ .62	\$ .51	\$ 1.20	\$ 1.09
Cumulative effect of accounting change	--	--	--	(.02)
Net income	\$ .62	\$ .51	\$ 1.20	\$ 1.07

Options on 8.4 million shares of common stock were not included in computing diluted earnings per share for the second quarter of 2003 because their effects were antidilutive.

PENSION AND OTHER POSTRETIREMENT BENEFITS

The components of net pension and other postretirement benefit cost are as follows:

	Three Months Ended 31 March			
	2004	2003	2004	2003
	Pension Benefits		Other Benefits	
Service cost	\$ 19.1	\$ 14.9	\$ 1.2	\$ 1.0
Interest cost	31.6	29.5	1.4	1.4
Expected return on plan assets	(32.5)	(28.9)	--	--
Prior service cost amortization	.8	.9	(.2)	(.2)
Actuarial loss (gain) amortization	8.7	4.1	.1	--
Transition amount amortization	(.1)	(.8)	--	--
Settlement and curtailment charges	4.6	--	--	--
Special termination benefits	.5	--	--	--
Other	.8	1.3	--	--
Net periodic benefit cost	\$ 33.5	\$ 21.0	\$ 2.5	\$ 2.2

	Six Months Ended 31 March			
	2004	2003	2004	2003
	Pension Benefits		Other Benefits	
Service cost	\$ 36.1	\$ 28.4	\$ 2.4	\$ 2.0
Interest cost	63.9	58.2	2.8	2.8
Expected return on plan assets	(61.2)	(58.5)	--	--
Prior service cost amortization	1.7	1.6	(.5)	(.4)
Actuarial loss (gain) amortization	17.3	5.6	.2	--
Transition amount amortization	(.2)	(1.9)	--	--
Settlement and curtailment charges	6.9	--	--	--
Special termination benefits	.5	--	--	--
Other	1.6	2.6	--	--
Net periodic benefit cost	\$ 66.6	\$ 36.0	\$ 4.9	\$ 4.4

The company previously disclosed, in its 2003 annual report on Form 10-K, expected cash contributions of approximately \$200 in 2004. During the six months ended 31 March 2004, contributions of \$190.5 were made. The company presently anticipates contributing a total of approximately \$220 in 2004. For the six months ended 31 March 2003, contributions of \$17.8 were made. During 2003, total contributions were \$61.6.

## LITIGATION

In the normal course of business, the company is occasionally involved in uninsured legal proceedings, including, in July 2003, Honeywell International, Inc. and GEM Microelectronic Materials, LLC filed suit against the company alleging breach of contract resulting from the termination of a Strategic Alliance Agreement dated 1 October 1998 ("SAA"). The suit alleges that the company will source certain chemicals produced from its recently acquired Ashland Electronic Chemicals business rather than sourcing them from Honeywell. The suit was filed in Delaware Chancery Court seeking specific performance of the SAA and, in the alternative, a combination of specific performance and monetary damages up to \$106. Trial was held during the week of 29 March 2004 and ended 2 April 2004. The company intends to continue its vigorous defense of this claim. No decision is expected until July or August 2004. The company has only established an accrual for the anticipated legal costs. Although management is not able to reasonably estimate the amount of any possible loss or a range of loss, it believes that a judgment on damages will be significantly less than the damages sought.

The company does not expect that any sums it may have to pay, if any, in connection with these matters would have a materially adverse effect on its consolidated financial position or net cash flows, even though a future charge for any damage award could have a significant impact on the company's net income in the period in which it is recorded.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

(MILLIONS OF DOLLARS, EXCEPT PER SHARE)

The disclosures in this quarterly report are complementary to those made in the company's 2003 annual report on Form 10-K and its 2004 first quarter Form 10-Q. An analysis of results for the second quarter of fiscal 2004 and the six months ended 31 March 2004, including an update to the company's 2004 outlook, is provided in the Management's Discussion and Analysis to follow.

All comparisons are to the corresponding period in the prior year unless otherwise stated. All amounts presented are in accordance with accounting principles generally accepted in the United States of America.

SECOND QUARTER FISCAL 2004 VS. SECOND QUARTER FISCAL 2003

RESULTS OF OPERATIONS

SECOND QUARTER FISCAL 2004 OVERVIEW

Second quarter sales of \$1,857 were up 18% from the prior year, due to higher volumes across the company's Gases and Chemicals segments, acquisitions, and favorable currency effects. As the economy and manufacturing environment improved, volume growth was strong. Sales benefited from the acquisitions made in 2003, which included Ashland Electronic Chemicals, U.S. homecare companies, and Sanwa Chemical Industry Co., Ltd. (Sanwa). Currency contributed favorably to results, as the dollar continued to weaken, with the majority of the impact coming from the strengthening of the Euro.

Operating income of \$210 was up 19% from the prior year, due to higher volumes and favorable currency effects, partially offset by higher costs. The cost increase was driven by higher pension expense, higher raw material costs not contractually passed through to customers in the Chemicals segment, and other increased selling and administrative expenses due to higher volumes in the business. Pension expense is higher in 2004 due to the lower discount rate and lower long-term asset return assumptions.

Net income of \$141 increased 24%. Diluted earnings per share of \$.62 increased 22%. A summary table of changes in earnings per share is presented below.

For a discussion of the opportunities, challenges and risks on which management is focused, refer to the update to the company's 2004 outlook provided on pages 29-30.

CHANGES IN EARNINGS PER SHARE

	THREE MONTHS ENDED 31		INCREASE (DECREASE)
	2004	MARCH 2003	
	----	-----	-----
DILUTED EARNINGS PER SHARE	\$ .62	\$ .51	\$ .11
	-----	-----	-----
OPERATING INCOME (AFTER-TAX)			
Acquisitions			.03
Divestitures			(.01)
Currency			.05
Underlying business			
Volume			.16
Price/raw materials			(.03)
Costs (excluding pension)			(.05)
Pension expense			(.04)
			-----
OPERATING INCOME			.11
OTHER (AFTER-TAX)			
Equity affiliates' income			.02
Interest expense (currency related)			(.01)
Effective tax rate			.02
Minority interest			(.01)
Average shares outstanding			(.02)
			-----
OTHER			--
			-----
TOTAL CHANGE IN EARNINGS PER SHARE			\$ .11
			-----

CONSOLIDATED RESULTS

	THREE MONTHS ENDED		% CHANGE
	2004	31 MARCH 2003	
	-----	-----	-----
SALES	\$1,856.5	\$1,578.1	18%
Cost of sales	1,369.6	1,176.3	16%
Selling and administrative	250.4	206.6	21%
Research and development	32.0	31.1	3%
Other (income) expense, net	(5.6)	(12.0)	(53%)
OPERATING INCOME	210.1	176.3	19%
Equity affiliates' income	22.0	15.2	45%
Interest expense	32.3	28.6	13%
Effective tax rate	28.0%	30.0%	(2.0%)
NET INCOME	141.2	113.6	24%
BASIC EARNINGS PER SHARE	\$ .63	\$ .52	21%
DILUTED EARNINGS PER SHARE	\$ .62	\$ .51	22%

## DISCUSSION OF CONSOLIDATED RESULTS

## SALES AND OPERATING INCOME

	% CHANGE FROM PRIOR YEAR	
	SALES	OPERATING INCOME
	-----	-----
Acquisitions	5%	5%
Divestitures	(1%)	(2%)
Currency	4%	9%
Natural gas cost pass-through	(2%)	--
Underlying business		
Volume	12%	29%
Price/raw materials	--	(5%)
Costs	--	(17%)
	---	---
TOTAL CONSOLIDATED CHANGE	18%	19%
	---	---

Sales of \$1,856.5 increased 18%, or \$278.4. Acquisitions, including U.S. homecare companies, Sanwa, and Ashland Electronic Chemicals in 2003, accounted for 5% of the increase. Favorable currency effects, with the majority driven by the strengthening of the Euro, accounted for an additional 4% of the sales growth. Underlying base business growth of 12% resulted from improved volumes in the Gases and Chemicals businesses as further discussed in the Segment Analysis which follows.

Operating income of \$210.1 increased 19%, or \$33.8. Consistent with the consolidated sales discussion above, favorable operating income variances resulted from acquisitions for 5%, favorable currency effects for 9%, and higher volumes for 29%. Operating income declined 5%, with the Chemicals segment results reflecting higher raw material costs not contractually passed through to customers and the pricing impact of a less favorable customer mix. Operating income decreased 17% from higher costs, primarily due to higher pension expense and other increased selling and administrative expenses due to higher volumes in the business.

## EQUITY AFFILIATES' INCOME

Income from equity affiliates of \$22.0 increased \$6.8. Gases equity affiliates' income increased by \$4.4 from favorable currency effects and higher income from Asian affiliates. Chemicals equity affiliates' income increased \$2.1 from the higher results reported by the global polymer joint venture.

## SELLING AND ADMINISTRATIVE EXPENSE (S&amp;A)

	% CHANGE FROM PRIOR YEAR
	-----
Acquisitions	6%
Divestitures	(1%)
Currency	4%
Other costs	12%
	--
TOTAL S&A CHANGE	21%
	--



S&A expense of \$250.4 increased 21%, or \$43.8. Acquisitions, including Ashland Electronic Chemicals and the U.S. homecare companies, increased S&A by 6%. Currency effects, driven by the strengthening of the Euro and the Pound Sterling, increased S&A by 4%. Underlying costs increased 12%, primarily due to higher pension and incentive compensation expenses and increased spending due to higher volumes in the business.

OTHER (INCOME) EXPENSE, NET

Other income of \$5.6 declined \$6.4. Items recorded to other income arise from transactions and events not directly related to the principal income earning activities of the company, and no individual item is material in the comparison to the prior year. Results in 2003 included higher technology and royalty income and gains on the sale of assets and investments. Results in 2004 included favorable legal settlements.

INTEREST EXPENSE

	THREE MONTHS ENDED 31 MARCH		
	2004	2003	% CHANGE
	-----	-----	-----
Interest incurred	\$33.4	\$29.4	14%
Less: interest capitalized	1.1	.8	38%
	-----	-----	--
Interest expense	\$32.3	\$28.6	13%
	-----	-----	--

Interest expense increased \$3.7. This increase resulted primarily from the impact of a weaker U.S. dollar on the translation of foreign currency interest.

EFFECTIVE TAX RATE

The effective tax rate equals the income tax provision divided by income before taxes less minority interest.

The effective tax rate was 28% compared to 30%. The lower rate is the result of increased credits and adjustments from the company's ongoing tax planning process, including such items as improved utilization of foreign tax credits, foreign tax holidays, and certain donations that are eligible for tax deductions. Additionally, changes in income mix reduced taxes.

NET INCOME

Net income was \$141.2, or \$.62 diluted earnings per share, compared to net income of \$113.6, or \$.51 diluted earnings per share. A summary table of changes in earnings per share is presented on page 15.

## SEGMENT ANALYSIS

## GASES

	THREE MONTHS ENDED 31 MARCH		% CHANGE
	2004	2003	
Sales	\$1,284.9	\$1,129.5	14%
Operating income	189.4	150.2	26%
Equity affiliates' income	19.0	14.6	30%

## GASES SALES AND OPERATING INCOME

	% CHANGE FROM PRIOR YEAR	
	SALES	OPERATING INCOME
Acquisitions	6%	5%
Divestitures	(1%)	(3%)
Currency	5%	8%
Natural gas cost pass-through	(2%)	--
Underlying business		
Volume	6%	22%
Price/raw materials	--	2%
Costs	--	(8%)
TOTAL GASES CHANGE	14%	26%

Sales of \$1,284.9 increased 14%, or \$155.4. Acquisitions, including U.S. homecare companies and Ashland Electronic Chemicals in 2003, accounted for 6% of the increase. Favorable currency effects, driven primarily by the strengthening of the Euro and also the Pound Sterling, accounted for an additional 5% sales increase.

Underlying base business sales growth of 6% resulted from improved volumes across the Electronics, Energy and Process Industries (EPI), and Healthcare growth businesses.

- Electronic specialty materials volumes increased, as strong business activity continued, including growth in the silicon and flat-panel display markets.
- On-site and pipeline volumes in EPI were up 13%, led by stronger oxygen, nitrogen and hydrogen volumes. Hydrogen growth versus the prior year is tracking the ongoing trend for refiners to meet lower sulfur specifications.
- Liquid bulk volumes in North America improved 2%. Liquid oxygen and argon volumes were particularly strong, benefiting from increased demand by the steel industry. Partially offsetting these increases, liquid hydrogen volumes declined from weakness in the chemical and process industries sector.
- Liquid bulk volumes in Europe declined 2%, with the conversion of several liquid customers to on-site supply.
- Asian liquid bulk volumes were up 10%, driven mainly by demand growth across the region.

Overall, the impact of pricing on sales was essentially neutral, with anticipated lower average selling prices of electronic specialty materials offset by higher liquid bulk prices in North America and Europe and higher packaged gas prices in Europe.

- Pricing for electronic specialty materials decreased due to a less favorable customer mix, customer conversions from cylinder to bulk supply, and competitive pricing pressures.
- On average, prices including surcharges for LOX/LIN in North America increased 2.5%. Surcharge impacts year-on-year were .5% favorable.
- LOX/LIN pricing in Europe increased 5%, influenced by continued pricing actions as well as the customer mix effect from the conversion of liquid customers to on-site supply.

Operating income of \$189.4 increased 26%, or \$39.2. Consistent with the sales analysis provided above, favorable operating income variances resulted from acquisitions for 5%, currency effects for 8%, and higher volumes for 22%. Operating income declined 8% from higher costs, including higher pension expense.

#### GASES EQUITY AFFILIATES' INCOME

Gases equity affiliates' income of \$19.0 increased \$4.4, primarily from favorable currency effects and higher income from Asian affiliates.

#### CHEMICALS

	THREE MONTHS ENDED 31 MARCH		% CHANGE
	2004	2003	
Sales	\$482.7	\$398.5	21%
Operating income	34.7	33.7	3%
Equity affiliates' income	2.9	.8	>100%

#### CHEMICALS SALES AND OPERATING INCOME

	% CHANGE FROM PRIOR YEAR	
	SALES	OPERATING INCOME
Acquisitions	2%	2%
Divestitures	--	2%
Currency	4%	12%
Natural gas cost pass-through	--	--
Underlying business		
Volume	15%	59%
Price/raw materials	--	(35%)
Costs	--	(37%)
TOTAL CHEMICALS CHANGE	21%	3%

Sales of \$482.7 increased 21%, or \$84.2. Sales increased 4% from favorable currency effects, driven primarily by the strengthening of the Euro. Underlying base business sales increased 15% from higher volumes across most of the company's Chemical Intermediates and Performance Materials businesses. Base business Performance Materials volumes increased 12%, with

improvements in all product areas reflecting the improved economic environment. In Chemical Intermediates, base business volumes increased 14%. Higher amines volumes increased from a better herbicide market. Polyurethane intermediate and methylamines volumes increased from new contractual volumes.

Operating income of \$34.7 increased 3%. Consistent with the sales analysis provided above, favorable operating income variances resulted from currency effects for 12% and higher volumes for 59%. Operating income declined 35% from higher raw material costs not contractually passed through to customers and the pricing impact of a less favorable customer mix. Operating income decreased 37% from higher costs, including manufacturing, pension, and selling and administrative expenses.

#### CHEMICALS EQUITY AFFILIATES' INCOME

Chemicals equity affiliates' income was \$2.9 compared to \$.8 in the prior year. Chemicals equity affiliates' income consists primarily of a global polymer joint venture.

#### EQUIPMENT

	THREE MONTHS ENDED 31 MARCH	
	2004	2003
	-----	-----
Sales	\$88.9	\$50.1
Operating (loss) income	(.2)	3.0
Equity affiliates' income	.1	(.2)

#### EQUIPMENT SALES AND OPERATING INCOME

Sales of \$88.9 increased primarily from higher air separation plant sales, partially offset by lower LNG heat exchanger sales. In addition, currency effects improved sales by 2%, due primarily to the strengthening of the Pound Sterling. The operating loss of \$.2 resulted from reduced LNG activity and lower margins in other equipment product lines.

#### ALL OTHER

All other comprises corporate expenses and income not allocated to the segments, primarily corporate research and development expense.

	THREE MONTHS ENDED 31 MARCH	
	2004	2003
	-----	-----
Operating loss	\$(13.8)	\$(10.6)
Equity affiliates' income	--	--

The operating loss of \$13.8 increased \$3.2 from the net impact of foreign exchange losses and other miscellaneous items, none of which individually is material in the comparison to the prior year.

RESULTS OF OPERATIONS

SIX MONTHS FISCAL 2004 OVERVIEW

The company's Gases and Chemicals businesses demonstrated improvements in sales and operating income growth during the first half of fiscal year 2004. As the economy and manufacturing environment improved, volume growth was strong. Sales of \$3,541 were up 17% from the prior year, due to higher volumes across the company's Gases and Chemicals segments, acquisitions, and favorable currency effects. Sales benefited from the acquisitions made in 2003, which included Ashland Electronic Chemicals, U.S. homecare companies, and Sanwa Chemical Industry Co., Ltd. (Sanwa). Currency contributed favorably to results, as the dollar continued to weaken, with the majority of the impact coming from the strengthening of the Euro.

Operating income of \$409 was up 10% from the prior year, due to higher volumes and favorable currency effects, partially offset by higher costs. The cost increase was driven by higher pension expense, higher raw material costs not contractually passed through to customers in the Chemicals segment, and other increased selling and administrative expenses due to higher volumes in the business. Pension expense is higher in 2004 due to the lower discount rate and lower long-term asset return assumptions.

Net income of \$273 increased 14%. Diluted earnings per share of \$1.20 increased 12%. A summary table of changes in earnings per share is presented below.

For a discussion of the opportunities, challenges and risks on which management is focused, refer to the update to the company's 2004 outlook provided on pages 29-30.

CHANGES IN EARNINGS PER SHARE

	SIX MONTHS ENDED 31 MARCH		INCREASE (DECREASE)
	2004	2003	
DILUTED EARNINGS PER SHARE	\$1.20	\$1.07	\$ .13
OPERATING INCOME (AFTER-TAX)			
Acquisitions			.05
Divestitures			(.01)
Currency			.11
Underlying business			
Volume			.26
Price/raw materials			(.07)
Costs (excluding pension)			(.09)
Pension expense			(.10)
Prior year adjustment - incentive compensation			(.03)
OPERATING INCOME			.12
OTHER (AFTER-TAX)			
Equity affiliates' income			.03
Prior year adjustment - divestitures of equity affiliates			(.04)
Interest expense			(.01)
Effective tax rate			.04
Cumulative effect of prior year accounting change			.02
Average shares outstanding			(.03)
OTHER			.01
TOTAL CHANGE IN EARNINGS PER SHARE			\$ .13

CONSOLIDATED RESULTS

	SIX MONTHS ENDED 31 MARCH		% CHANGE
	2004	2003	
SALES	\$3,541.4	\$3,025.1	17%
Cost of sales	2,599.8	2,209.3	18%
Selling and administrative	481.8	399.9	20%
Research and development	62.0	61.1	1%
Other (income) expense, net	(11.1)	(15.3)	(27%)
OPERATING INCOME	408.9	370.3	10%
Equity affiliates' income	41.6	43.5	(4%)
Interest expense	63.2	60.3	5%
Effective tax rate	28.0%	30.0%	(2.0%)
NET INCOME	273.0	239.4	14%
BASIC EARNINGS PER SHARE	\$ 1.23	\$ 1.09	13%
DILUTED EARNINGS PER SHARE	\$ 1.20	\$ 1.07	12%

## DISCUSSION OF CONSOLIDATED RESULTS

## SALES AND OPERATING INCOME

	% CHANGE FROM PRIOR YEAR	
	SALES	OPERATING INCOME
Acquisitions	5%	4%
Divestitures	(1%)	(1%)
Currency	5%	9%
Natural gas cost pass-through	--	--
Underlying business		
Volume	8%	22%
Price/raw materials	--	(6%)
Costs	--	(18%)
	---	---
TOTAL CONSOLIDATED CHANGE	17%	10%
	---	---

Sales of \$3,541.4 increased 17%, or \$516.3. Acquisitions, including U.S. homecare companies, Sanwa, and Ashland Electronic Chemicals in 2003, accounted for 5% of the increase. Favorable currency effects, driven by the strengthening of the Euro, accounted for an additional 5% of the sales growth. Underlying base business growth of 8% resulted from improved volumes in the Gases and Chemicals businesses as further discussed in the Segment Analysis which follows.

Operating income of \$408.9 increased 10%, or \$38.6. Consistent with the consolidated sales discussion above, favorable operating income variances resulted from acquisitions for 4%, favorable currency effects for 9%, and higher volumes for 22%. Operating income decreased 6% primarily from higher raw material costs not contractually passed through to customers within the Chemicals segment. Operating income declined 18% from higher costs, primarily higher pension expense and other increased selling and administrative expense due to higher volumes in the business. In addition, the prior year included an adjustment for lower than anticipated payments of fiscal year 2002 incentive compensation costs.

## EQUITY AFFILIATES' INCOME

Income from equity affiliates of \$41.6 decreased \$1.9. Current year results, including favorable currency effects and higher income from the Gases Asian and Latin American affiliates, substantially offset the impact of \$14 in favorable adjustments recorded in the first quarter of 2003 related to prior period divestitures.

## SELLING AND ADMINISTRATIVE EXPENSE (S&amp;A)

	% CHANGE FROM PRIOR YEAR
Acquisitions	8%
Divestitures	(1%)
Currency	4%
Other costs	9%
	---
TOTAL S&A CHANGE	20%
	---

S&A expense of \$481.8 increased 20%, or \$81.9. Acquisitions, including Ashland Electronic Chemicals and the U.S. homecare companies, increased S&A by 8%. Currency effects, driven by the strengthening of the Euro and the Pound Sterling, increased S&A by 4%. Underlying costs increased 9%, primarily due to higher current year pension and incentive compensation expenses, the prior year adjustment for lower than anticipated payments of fiscal year 2002 incentive compensation costs, and increased spending due to higher volumes in the business.

#### OTHER (INCOME) EXPENSE, NET

Other income of \$11.1 declined \$4.2. Items recorded to other income arise from transactions and events not directly related to the principal income earning activities of the company, and no individual item is material in the comparison to the prior year. Results in 2003 included higher technology and royalty income and gains on the sale of assets and investments. Results in 2004 included favorable legal settlements.

#### INTEREST EXPENSE

	SIX MONTHS ENDED 31 MARCH		% CHANGE
	2004	2003	
Interest incurred	\$65.9	\$62.5	5%
Less: interest capitalized	2.7	2.2	23%
	-----	-----	--
Interest expense	\$63.2	\$60.3	5%
	-----	-----	--

Interest expense increased \$2.9. This increase was driven by the impact of a weaker U.S. dollar on the translation of foreign currency interest, partially offset by the impact from lower average interest rates and a lower average debt balance outstanding (excluding currency effects).

#### EFFECTIVE TAX RATE

The effective tax rate equals the income tax provision divided by income before taxes less minority interest.

The effective tax rate was 28% compared to 30%. The lower rate is the result of increased credits and adjustments from the company's ongoing tax planning process, including such items as improved utilization of foreign tax credits, foreign tax holidays, and certain donations that are eligible for tax deductions. Additionally, changes in income mix reduced taxes.

#### NET INCOME

Net income was \$273.0, or \$1.20 diluted earnings per share, compared to net income of \$239.4, or \$1.07 diluted earnings per share. Prior year net income includes an after-tax transition charge of \$2.9, or \$.02 diluted earnings per share, which was recorded as the cumulative effect of an accounting change. A summary table of changes in earnings per share is presented on page 22.



## SEGMENT ANALYSIS

## GASES

	SIX MONTHS ENDED 31 MARCH		% CHANGE
	2004	2003	
Sales	\$2,488.4	\$2,155.3	15%
Operating income	371.7	318.2	17%
Equity affiliates' income	36.7	31.8	15%

## GASES SALES AND OPERATING INCOME

	% CHANGE FROM PRIOR YEAR	
	SALES	OPERATING INCOME
Acquisitions	6%	5%
Divestitures	(1%)	(2%)
Currency	5%	7%
Natural gas cost pass-through	(1%)	--
Underlying business		
Volume	6%	19%
Price/raw materials	--	(1%)
Costs	--	(11%)
TOTAL GASES CHANGE	15%	17%

Sales of \$2,488.4 increased 15%, or \$333.1. Acquisitions, including U.S. homecare companies and Ashland Electronic Chemicals in 2003, accounted for 6% of the increase. Favorable currency effects, driven primarily by the strengthening of the Euro and also the Pound Sterling, accounted for an additional 5% sales increase.

Underlying base business sales growth of 6% resulted from improved volumes across the Electronics, Energy and Process Industries (EPI), and Healthcare growth businesses.

- Electronic specialty materials volumes increased, as electronics markets continued to improve, including strong growth in the flat-panel display market.
- On-site and pipeline volumes in EPI were up 10%, led by stronger oxygen, nitrogen and hydrogen volumes. Hydrogen growth versus the prior year is tracking the ongoing trend for refiners to meet lower sulfur specifications.
- Liquid bulk volumes in North America were flat. Liquid oxygen and argon volumes improved along with general U.S. manufacturing growth. Partially offsetting these increases, liquid hydrogen volumes declined from weakness in the chemical and process industries sector.
- Liquid bulk volumes in Europe declined 2%, with the conversion of several liquid customers to on-site supply.
- Asian liquid bulk volumes were up 8%, driven by demand growth across the region.

Overall, the impact of pricing on sales was essentially neutral, with anticipated lower average selling prices of electronic specialty materials offset by higher liquid bulk prices in North America and Europe and higher packaged gas prices in Europe.

- Pricing for electronic specialty materials decreased due to a less favorable customer mix, customer conversions from cylinder to bulk supply, and competitive pricing pressures.
- On average, prices including surcharges for LOX/LIN in North America increased 1.7%. Surcharge impacts year-on-year were .5% favorable.
- LOX/LIN pricing in Europe increased 6%, influenced by continued pricing actions as well as the customer mix effect from the conversion of liquid customers to on-site supply.

Operating income of \$371.7 increased 17%, or \$53.5. Consistent with the sales analysis provided above, favorable operating income variances resulted from acquisitions for 5%, currency effects for 7%, and higher volumes for 19%. Operating income declined 11% from higher costs, including higher pension expense. Also impacting the comparison, the prior year included a portion of the favorable adjustment for lower than anticipated payments of fiscal year 2002 incentive compensation costs.

#### GASES EQUITY AFFILIATES' INCOME

Gases equity affiliates' income of \$36.7 increased 15%, or \$4.9. Current year results, including favorable currency effects and higher income from the Asian and Latin American affiliates, more than offset the impact of favorable adjustments recorded in the prior year associated with two divested cogeneration plant investments.

#### CHEMICALS

	SIX MONTHS ENDED 31 MARCH		% CHANGE
	2004	2003	
Sales	\$892.8	\$752.3	19%
Operating income	59.2	66.8	(11%)
Equity affiliates' income	4.8	3.3	45%

#### CHEMICALS SALES AND OPERATING INCOME

	% CHANGE FROM PRIOR YEAR	
	SALES	OPERATING INCOME
Acquisitions	2%	2%
Divestitures	--	1%
Currency	4%	15%
Natural gas cost pass-through	--	--
Underlying business		
Volume	11%	40%
Price/raw materials	2%	(30%)
Costs	--	(39%)
TOTAL CHEMICALS CHANGE	19%	(11%)

Sales of \$892.8 increased 19%, or \$140.5. Sales increased 4% from favorable currency effects, driven primarily by the strengthening of the Euro. Underlying base business sales increased 11% from higher volumes across most of the company's Chemical Intermediates and Performance Materials businesses. Base business Performance Materials volumes increased 10%, with improvements in most businesses and regions, reflecting the improved economic environment. In Chemical Intermediates, base business volumes increased 9%. Higher amines volumes increased from a better herbicide market. Methylamines and polyurethane volumes increased from new contractual volumes.

Operating income of \$59.2 decreased 11%, or \$7.6. Consistent with the sales analysis provided above, favorable operating income variances resulted from currency effects for 15% and higher volumes for 40%. Operating income declined 30% from higher raw material costs not contractually passed through to customers. Operating income decreased 39% from higher costs, including higher manufacturing, pension, and selling and administrative expenses. In addition, the prior year results included a portion of the favorable adjustment for lower than anticipated payments of fiscal 2002 incentive compensation costs.

#### CHEMICALS EQUITY AFFILIATES' INCOME

Chemicals equity affiliates' income was \$4.8 compared to \$3.3 in the prior year. Chemicals equity affiliates' income consists primarily of a global polymer joint venture.

#### EQUIPMENT

	SIX MONTHS ENDED 31 MARCH	
	2004	2003
	-----	-----
Sales	\$160.2	\$117.5
Operating (loss) income	(.5)	7.1
Equity affiliates' income	.1	.1

#### EQUIPMENT SALES AND OPERATING INCOME

Sales of \$160.2 increased 36%, or \$42.7. The sales increase resulted primarily from higher air separation plant sales, partially offset by lower LNG heat exchanger sales. In addition, currency effects improved sales by 2%, due primarily to the strengthening of the Pound Sterling. The operating loss of \$.5 resulted from reduced LNG activity and lower margins in other equipment product lines.

The sales backlog for the equipment segment at 31 March 2004 was \$291.3 compared to \$231.7 at 31 March 2003 and \$258.8 at September 2003. Four LNG heat exchangers remain in the sales backlog.

ALL OTHER

All other comprises corporate expenses and income not allocated to the segments, primarily corporate research and development expense.

	SIX MONTHS ENDED 31 MARCH	
	2004	2003
	-----	-----
Operating loss	\$(21.5)	\$(21.8)
Equity affiliates' income	--	8.3

Operating loss of \$21.5 was comparable to \$21.8 in the prior year, and no individual items were material in the comparison to the prior year.

Other equity affiliates' income of \$8.3 in 2003 represents a favorable adjustment recorded in the prior year associated with a divested business not associated with any of the company's current segments.

PENSION BENEFITS

Refer to the notes to the consolidated financial statements for details on pension cost and cash contributions. For additional information on the company's pension benefits and associated accounting policies, refer to the Pension Benefits section of Management's Discussion and Analysis and Note 17 to the consolidated financial statements in the company's 2003 annual report on Form 10-K.

LITIGATION

Refer to the notes to the consolidated financial statements for information concerning the company's involvement in an uninsured legal proceeding.

## 2004 OUTLOOK

The company's priority is to improve return on capital. Action plans are in place to load existing assets, drive productivity, focus capital spending on growth areas, and continuously improve the company's portfolio of businesses. The discussion below highlights some of these action plans, and outlines the areas of opportunity, challenge, and risk, on which management is focused. The combination of improving volumes and the potential to lower costs should have a favorable impact on the company's businesses and returns for the rest of fiscal 2004. Any significant upfront costs associated with possible portfolio management and cost reduction actions could reduce near-term results.

### ECONOMIC ENVIRONMENT

Domestic manufacturing activity in the first half of 2004 improved, up 2.4% from the prior year. Indications are that consumer demand remains healthy, plans for new plant and equipment investment remain high, and domestic manufacturing inventories continue to remain tight. We are optimistic these three factors should contribute to sustained growth in manufacturing output in the near term.

The translation of foreign earnings into U.S. dollars had a favorable impact on the company's income as a result of the weaker dollar. The company has seen evidence of the strong Euro impacting European economic activity and volumes and therefore remains cautious about economic growth in Europe.

### GASES

The Gases business continued to demonstrate improvement in both sales and operating income growth in the second quarter. The priority in Gases will be to continue increasing operating leverage by driving productivity and loading assets. Volume growth is expected, particularly in the Electronics business. EPI hydrogen volumes should expand given seasonally strong gasoline production as well as a new facility in Lake Charles, Louisiana, which came onstream in April 2004. Pricing is expected to remain solid, except for Electronics, where pricing pressures are expected to continue.

Strong growth is anticipated to continue in the Healthcare business, and the company plans to spend about \$50-75 on homecare acquisitions in fiscal year 2004. During the first half of the fiscal year, two small homecare businesses were acquired, with an additional small homecare acquisition completed early in the third quarter.

### CHEMICALS

Higher raw material costs not contractually passed through to customers had a negative impact on Chemicals segment results during the first half of the year. The company expects to increase its recovery of raw material costs in the second half of the year as a result of the recently implemented price increases in performance polymers. The company also implemented price increases in several amines product lines. In the fourth quarter, a long-term supply arrangement to purchase methanol for domestic methylamines production should start, which should materially reduce raw material cost volatility.

In Performance Materials, volume improvement should continue with the improving manufacturing environment. In Chemical Intermediates, volumes improved in the second quarter due to seasonality, the ending of the customer outages experienced in the first quarter, and the addition of several new customer contracts. Volumes in higher amines will decline in the second half of the year, as the major market for these products is agricultural chemicals, which typically peaks in the second quarter.

A long-term supplier of sulfuric acid, used in the production of dinitrotoluene (DNT), emerged from Chapter 11 bankruptcy protection in June 2003. To facilitate the supplier's ability to emerge from bankruptcy and to continue supplying product to the company, the company agreed to participate in the supplier's financing and has continued to supply additional financing. Total loans to the supplier at

31 March 2004 totaled \$46.3. If the supplier does not continue to operate, the sales and profitability of the Chemicals segment could be materially impacted on an annual basis because of the company's inability to supply all of its customers' base requirements. The company does not expect a material loss related to this supplier.

#### EQUIPMENT

In Equipment, two new LNG orders were received during the first half of the year. The first half of the year was about breakeven. An increase in Equipment segment profitability is expected in the second half of the fiscal year, from the start of profit recognition on these recent orders.

#### SELLING AND ADMINISTRATIVE EXPENSE

The company has identified opportunities to drive productivity in S&A spending. In particular, the company's SAP project is focused on lowering transaction costs, which are mainly contained in S&A. The company now has 70% of its business on its new SAP system. Customers have not been impacted by the implementation and the company is already identifying ways to improve productivity.

#### GLOBAL COST REDUCTION PLANS

A global cost reduction plan was announced in the third quarter of fiscal 2003. As part of this plan, the company decided to pursue the sale of its European methylamines and derivatives business. In April 2004, the company announced the proposed sale of this business, which is pending regulatory approval. Although the timing of the EM&D divestiture is later than originally planned, the projected cost savings associated with the global cost reduction plan of \$38 in 2004 will not be materially impacted. In addition, the company is on track to achieve the projected cost savings of \$59 in 2005.

#### CAPITAL EXPENDITURES

The company will maintain discipline in its capital spending. Capital expenditures for new plant and equipment are expected to be between \$650 and \$750 in 2004. In addition, the company intends to continue to evaluate acquisition opportunities and investments in affiliated entities, choosing only the best opportunities. It is anticipated these expenditures will be funded primarily with cash from operations.

#### LITIGATION

In the normal course of business, the company is occasionally involved in uninsured legal proceedings. (Refer to the notes to the consolidated financial statements for further information.) The company does not expect that any sums it may have to pay, if any, in connection with these matters would have a materially adverse effect on its consolidated financial position or net cash flows, even though a future charge for any damage award could have a significant impact on the company's net income in the period in which it is recorded.

LIQUIDITY AND CAPITAL RESOURCES

CASH FLOW

The narrative below refers to the Consolidated Statements of Cash Flows included on page 6.

OPERATING ACTIVITIES

Net cash provided by operating activities decreased \$68.1, or 15%. Before working capital changes, the contribution of net income after adjustments to reconcile income to cash provided by operating activities was up \$103.3. Net income increased by \$33.6. Adjustments favorably contributing to the change in cash provided by operating activities included depreciation expense and other operating changes. The increase in depreciation expense of \$34.8 was due principally to currency effects and acquisitions. The increase in other operating changes of \$34.6 was principally due to an increase in noncurrent liabilities as a result of higher pension expense. These favorable impacts were offset by an increase in cash used for working capital requirements of \$171.4. The increase reflects higher sales, the timing of normal payments and accruals, and higher cash contributions to the pension plans.

INVESTING ACTIVITIES

Cash used for investing activities decreased \$126.5, due primarily to lower acquisitions, partially offset by higher additions to plant and equipment and lower proceeds from the sale of assets and investments. Acquisitions in 2004, totaling \$44.8, principally included two small U.S. homecare businesses. Acquisitions in 2003, totaling \$233.8, included American Homecare Supply, LLC, additional small homecare businesses and Sanwa Chemical Industry Co., Ltd.

Capital expenditures are detailed in the following table:

	SIX MONTHS ENDED 31 MARCH	
	2004 -----	2003 -----
Additions to plant and equipment	\$327.7	\$294.1
Investment in and advances to unconsolidated affiliates	3.9	5.2
Acquisitions, less cash acquired	44.8	233.8
Long-term debt assumed in acquisitions	--	4.0
Capital leases	2.9	2.6
	-----	-----
	\$379.3	\$539.7
	=====	=====

FINANCING ACTIVITIES

Cash provided by financing activities was \$56.2 in 2004, compared with cash used for financing activities of \$131.7 in 2003. This \$187.9 change was due primarily to increased short-term borrowings in 2004 and an increase in cash provided by the issuance of stock for options and award plans of \$64.8 due to an increase in stock option exercises. Long-term debt repayments were primarily funded by long-term debt borrowings. The primary long-term borrowing was a \$125.0 seven-year, fixed-rate borrowing with a coupon rate of 4.125%.

Total debt at 31 March 2004 and 30 September 2003, expressed as a percentage of the sum of total debt, shareholders' equity, and minority interest, was 38% and 39%, respectively. Total debt increased from \$2,510.7 at 30 September 2003 to \$2,654.2 at 31 March 2004, due primarily to additional commercial paper borrowings and the impact of a weaker U.S. dollar on the translation of foreign currency debt.

At 30 September 2003, the company's committed lines of credit totaled \$600, maturing in January 2005. During the first quarter of 2004, the company replaced these commitments with a new \$700 multicurrency revolving credit facility, maturing in December 2008. No borrowings were outstanding under these commitments. Additional commitments totaling \$36.8 are maintained by the company's foreign subsidiaries, of which \$11.1 was utilized at 31 March 2004.

The estimated fair value of the company's long-term debt, including current portion, as of 31 March 2004 is \$2,640.9 compared to a book value of \$2,509.9.

On 9 January 2004, the company filed a Form S-3 Registration Statement with the U.S. Securities and Exchange Commission, which became effective on 26 January 2004. The shelf registration enables the company to issue up to \$1 billion of debt and equity securities. The primary use of the proceeds is expected to be to refund long-term debt maturing in 2004 and 2005.

On 8 April 2004, the company exchanged Euro 209.3 (\$252.9) of 6% Eurobonds maturing on 30 March 2005 for an issuance of Euro 218.3 (\$263.9) of 4.25% Eurobonds maturing 10 April 2012. An additional Euro 81.7 (\$98.7) of 4.25% Eurobonds maturing 10 April 2012 were issued for cash, which funded the repayment of outstanding commercial paper.

#### CONTRACTUAL OBLIGATIONS

The company is obligated to make future payments under various contracts such as debt agreements, lease agreements and unconditional purchase obligations. There have been no material changes to contractual obligations as reflected in the Management's Discussion and Analysis in the company's 2003 annual report on Form 10-K.

#### OFF-BALANCE SHEET ARRANGEMENTS

There have been no material changes to off-balance sheet arrangements as reflected in the Management's Discussion and Analysis in the company's 2003 annual report on Form 10-K. The company's off-balance sheet arrangements are not reasonably likely to have a material impact on financial condition, changes in financial condition, results of operations, or liquidity.

#### RELATED PARTY TRANSACTIONS

The company's principal related parties are equity affiliates operating in industrial gas and chemicals businesses. The company did not engage in any material transactions involving related parties that included terms or other aspects that differ from those which would be negotiated at arm's length with clearly independent parties.



## MARKET RISKS AND SENSITIVITY ANALYSIS

Information on the company's utilization of financial instruments and an analysis of the sensitivity of these instruments to selected changes in market rates and prices is included in the company's 2003 annual report on Form 10-K. There was no material change to market risk sensitivity since 30 September 2003.

The net financial instrument position of the company increased from a liability of \$2,542.1 at 30 September 2003 to a liability of \$2,728.9 at 31 March 2004 primarily due to the impact of a weaker U.S. dollar on the translation of foreign currency debt and the market value of foreign exchange forward contracts and the impact of lower U.S. Dollar and Euro interest rates on the market value of fixed rate debt.

## CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Management's Discussion and Analysis of the company's financial condition and results of operations is based on the consolidated financial statements and accompanying notes that have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements 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.

The significant accounting policies of the company are described in Note 1 to the consolidated financial statements and the critical accounting policies and estimates are described in the Management's Discussion and Analysis included in the 2003 annual report on Form 10-K. Information concerning the company's implementation and impact of new accounting standards issued by the Financial Accounting Standards Board (FASB) is included in the notes to the consolidated financial statements. There have been no other changes in accounting policy in the current period that had a material impact on the company's financial condition, change in financial condition, liquidity or results of operations.

## NEW ACCOUNTING STANDARDS

In December 2003, the FASB published a revision to Interpretation No. 46, "Consolidation of Variable Interest Entities," to clarify some of the provisions of Interpretation No. 46. In December 2003, the FASB also issued a revised Statement of Financial Accounting Standard (SFAS) No. 132, "Employers' Disclosures about Pensions and Other Postretirement Benefits," which added disclosure requirements for defined benefit plans. In January 2004, the FASB issued a FASB Staff Position (FSP) No. FAS 106-1, "Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (Act)." This new FSP permits recognition or deferral of the effects of the prescription-drug provisions of the Act in current financial statements. See the notes to the consolidated financial statements for information concerning the company's implementation and impact of these new standards.

## 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. Factors that might cause forward-looking statements to differ materially from actual results include, among other things, overall economic and business conditions different than those currently anticipated and demand for the company's goods and services; competitive factors in the industries in which it competes; interruption in ordinary sources of supply; the ability to recover unanticipated increased energy and raw material costs from customers; uninsured litigation judgments or settlements; spikes in the pricing of natural gas; changes in government regulations; consequences of acts of war or terrorism impacting the United States and other markets; charges related to currently unplanned portfolio management and cost reduction actions; the success of implementing cost reduction programs; the timing, impact, and other uncertainties of future acquisitions or divestitures; significant fluctuations in interest rates and foreign currencies from that currently anticipated; the impact of tax and other legislation and regulations in jurisdictions in which the company and its affiliates operate; and the timing and rate at which tax credits can be utilized.

## ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Refer to the Market Risks and Sensitivity Analysis on page 33 of Item 2 in Management's Discussion and Analysis of Financial Condition and Results of Operations.

## ITEM 4. CONTROLS AND PROCEDURES

Under the supervision of the Chief Executive Officer and Chief Financial Officer, the company's management conducted an evaluation of the effectiveness of the design and operation of the company's disclosure controls and procedures as of 31 March 2004. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the design and operation of its disclosure controls and procedures have been effective. As previously disclosed, the company is in the midst of an SAP implementation. As a result, certain changes have been made to the company's internal control structure, in connection with the SAP implementation, which management believes will strengthen their internal control structure. There have been no other significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of such evaluation.

PART II. OTHER INFORMATION

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

- a. The Annual Meeting of Shareholders of the Registrant was held on 22 January 2004.
- b. The following directors were elected at the meeting: W. Douglas Ford, James F. Hardymon, Paula G. Rosput, and Lawrason D. Thomas. Directors whose term of office continued after the meeting include: Michael J. Donahue, Ursula F. Fairbairn, John P. Jones III, Mario L. Baeza, Edward E. Hagenlocker, and Terrence Murray.
- c. The following matters were voted on at the Annual Meeting:

1. Election of Directors

NUMBER OF VOTES CAST

NAME OF DIRECTOR	FOR	AGAINST OR WITHHELD	ABSTENTIONS	BROKER NON- VOTES
W. Douglas Ford	202,397,267	2,853,843	0	0
James F. Hardymon	197,973,951	7,277,161	0	0
Paula G. Rosput	196,938,822	8,312,289	0	0
Lawrason D. Thomas	201,336,258	3,914,854	0	0

- 2. Ratification of the appointment of KPMG LLP of Philadelphia, Pennsylvania, as independent auditor for the registrant for the fiscal year ending 30 September 2004

NUMBER OF VOTES CAST

FOR	AGAINST OR WITHHELD	ABSTENTIONS	BROKER NON-VOTES
201,328,657	2,487,474	1,434,975	0

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K.

(a) Exhibits required by Item 601 of Regulation S-K

12. Computation of Ratios of Earnings to Fixed Charges.

31.1. Certification by the Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

31.2. Certification by the Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

32. Certification by the Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

(b) Reports on Form 8-K

Current Report on Form 8-K dated 21 January 2004, in which Items 7 and 12 of such Form were reported and dated 18 February 2004 in which Items 5 and 7 of such Form were reported.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Air Products and Chemicals, Inc.

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(Registrant)

Date: 13 May 2004

By: /s/Paul E. Huck

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Paul E. Huck  
Vice President and  
Chief Financial Officer

EXHIBIT INDEX

- 12. Computation of Ratios of Earnings to Fixed Charges.
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- 31.2. Certification by the Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32. Certification by the Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

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

COMPUTATION OF RATIOS OF EARNINGS TO FIXED CHARGES  
(Unaudited)

	Year Ended 30 September					Six Months Ended 31 March
	1999	2000	2001	2002	2003	2004
<b>EARNINGS:</b>						
Income from continuing operations	\$ 450.5	\$ 124.2	\$ 465.6	\$ 525.4	\$ 400.2	\$ 273.0
Add (deduct):						
Provision for income taxes	209.5	(7.5)	196.2	247.5	154.0	109.8
Fixed charges, excluding capitalized interest	194.4	232.6	226.5	150.3	150.6	76.6
Capitalized interest amortized during the period	6.1	6.6	7.1	7.2	6.5	4.9
Undistributed earnings of less-than-fifty-percent-owned affiliates	(44.5)	(32.1)	(34.3)	(42.8)	(2.6)	(17.0)
Earnings, as adjusted	\$ 816.0	\$ 323.8	\$ 861.1	\$ 887.6	\$ 708.7	\$ 447.3
<b>FIXED CHARGES:</b>						
Interest on indebtedness, including capital lease obligations	\$ 175.4	\$ 210.3	\$ 201.6	\$ 126.4	\$ 126.9	\$ 64.7
Capitalized interest	24.7	19.7	8.8	11.7	6.2	4.9
Amortization of debt discount premium and expense	1.3	3.1	5.6	2.2	2.1	0.8
Portion of rents under operating leases representative of the interest factor	17.7	19.3	19.3	21.7	21.6	11.1
Fixed charges	\$ 219.1	\$ 252.4	\$ 235.3	\$ 162.0	\$ 156.8	\$ 81.5
<b>RATIO OF EARNINGS TO FIXED CHARGES:</b>	<b>3.7</b>	<b>1.3</b>	<b>3.7</b>	<b>5.5</b>	<b>4.5</b>	<b>5.5</b>

## CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

I, John P. Jones, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Air Products and Chemicals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and



- (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: 13 May 2004

/s/ John P. Jones III  
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John P. Jones  
Chairman, President and Chief  
Executive Officer  
(Principal Executive Officer)

## CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

I, Paul E. Huck, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Air Products and Chemicals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

- (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: 13 May 2004

/s/ Paul E. Huck

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

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO SECTION 906 OF THE  
SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Air Products and Chemicals, Inc. (the "Company") on Form 10-Q for the period ending 31 March 2004, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, John P. Jones III, Chief Executive Officer of the Company, and Paul E. Huck, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: 13 May 2004

/s/ John P. Jones III

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John P. Jones III  
Chief Executive Officer

/s/ Paul E. Huck

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Paul E. Huck  
Chief Financial Officer