UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the

Securities Exchange Act of 1934

Date of Report (Date of earliest event reported) 28 April 2004

Air Products and Chemicals, Inc. (Exact name of registrant as specified in charter)

Delaware (State or other jurisdiction (Commission file of incorporation)

1-4534 number)

23-1274455 (IKS Employ. Identification No.) (IRS Employer

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 or Former Address, if changed Since Last Report)

Item 7. Financial Statements, Pro Forma Financial Information and Exhibits

(c) Exhibits

99.1 The financial tables, including the Summary of Consolidated Financial Information, presented on pages 3 through 9 of the Press Release issued by the registrant on 28 April 2004, are incorporated herein by reference. With the exception of the portions specifically incorporated by reference, the Press Release is not deemed to be filed.

Item 12. Results of Operations and Financial Condition

On 28 April 2004, the company issued a press release announcing its earnings for the second quarter of fiscal year 2004. A copy of the press release is attached as Exhibit 99.1 to this Form 8-K.

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. (Registrant)

Dated: 28 April 2004 By: /s/ Paul E. Huck

Paul E. Huck

Vice President and Chief Financial Officer

Press release issued by Air Products and Chemicals, Inc. on 28 April 2004, announcing results for the second quarter of fiscal year 2004.

News Release

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

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AIR PRODUCTS REPORTS SECOND QUARTER EPS OF 62 CENTS

Access the Q2 earnings teleconference scheduled for 10:00 a.m. Eastern Time (ET) on April 28th by calling (913) 981-5522 and entering passcode 465665, or listen on the Web at www.airproducts.com/Invest/EarningsReleases.htm. Access the teleconference slides at www.airproducts.com/Invest/EarningsReleases/Teleconference.htm.

LEHIGH VALLEY, Pa. (April 28, 2004) - Air Products (NYSE:APD) today reported net income of \$141 million or diluted earnings per share (EPS) of \$.62 for its second fiscal quarter ended March 31, 2004. Net income increased 24 percent and diluted EPS was up 22 percent compared with the prior year. Sequentially, net income and EPS increased seven percent.

Record quarter revenues of \$1,857 million were up 18 percent from the prior year on stronger volumes across the company's Gases and Chemicals segments, acquisitions, and favorable currency effects. Sequentially, revenues increased 10 percent, driven by improved volumes and favorable currency effects. Operating income of \$210 million was up 19 percent from the prior year and up six percent sequentially.

John P. Jones, Air Products' chairman and chief executive officer, said, "As the manufacturing environment continued to improve, we saw significant volume increases based on strong demand in our growth platforms and our ability to leverage our existing asset base."

Gases segment sales of \$1,285 million increased 14 percent over the prior year, mainly on higher volumes and acquisitions in the company's Electronics and Healthcare growth platforms, and favorable currency effects. Operating income of \$189 million increased 26 percent, as operating leverage from improved asset loadings more than offset higher costs.

Sequentially, Gases revenues increased seven percent, principally due to stronger volumes in Electronics and Energy and Process Industries. Operating income increased four percent as volume growth was partially offset by higher costs.

Chemicals segment sales of \$483 million increased 21 percent versus the prior year due to strong volume growth across the company's Performance Materials growth platform and base Intermediates businesses. Operating income of \$35 million increased three percent, as higher volumes were largely offset by higher raw material and other costs.

Sequentially, Chemicals revenues were up 18 percent and operating income increased 42 percent on expected seasonally stronger volumes and new business signings.

Equipment segment revenues of \$89 million were up over the prior year on higher air separation unit sales. Operating income declined on lower liquefied natural gas (LNG) heat exchanger activity. Air Products received a new LNG heat exchanger order at the end of the second quarter.

Looking forward, Mr. Jones said, "Our solid volume gains during the first half of the year, coupled with improving manufacturing in North America and Asia, should improve earnings in the second half of our fiscal year. We are now projecting a full-year EPS range of \$2.45 to \$2.65 and a third fiscal quarter EPS range of \$.63 to \$.68."

Mr. Jones continued, "Our continued earnings improvement is evidence that the strategies we embarked upon a few years ago are working and delivering value for Air Products' shareholders and customers. Our top line growth remains strong and our SAP project, an integral part of our productivity efforts, is on budget and on schedule."

Air Products will continue to drive portfolio management and cost reduction actions similar to prior years. Upfront costs associated with such actions could reduce Air Products' projected earnings for the current fiscal year.

Air Products (NYSE:APD) serves customers in technology, energy, healthcare and industrial markets worldwide with a unique portfolio of products, services and solutions, providing atmospheric gases, process and specialty gases, performance materials and chemical intermediates. Founded in 1940, Air Products has built leading positions in key growth markets such as semiconductor materials, refinery hydrogen, home healthcare services, natural gas liquefaction, and advanced coatings and adhesives. The company is recognized for its innovative culture, operational excellence and commitment to safety and the environment. With annual revenues of \$6.3 billion and operations in over 30 countries, the company's 18,500 employees build lasting relationships with their customers and communities based on understanding, integrity and passion. For more information, visit www.airproducts.com.

NOTE: The forward-looking statements contained in this presentation 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 Air Products' 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 Air Products and its affiliates operate; and the timing and rate at which tax credits can be utilized.

Please review the attached financial tables, including the Summary of Consolidated Financial Information:

AIR PRODUCTS AND CHEMICALS, INC. SUMMARY OF CONSOLIDATED FINANCIAL INFORMATION (Unaudited)

(Millions	of	dollars,	except	per	share)	
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		31 M 2004	larc	h 2003	Six Months Ended 31 March 2004 2003				
Sales	\$:	1,856.5	\$	1,578.1	\$	3,541.4	\$	3,025.1	
Income Before Cumulative Effect of Accounting Change	\$	141.2	\$	113.6	\$	273.0	\$	242.3	
Cumulative Effect of Accounting Change								(2.9)	
	\$	141.2		113.6					
Basic Earnings Per Share: Income Before Cumulative Effect of Accounting Change Cumulative Effect of Accounting Change				. 52				(.02)	
Net Income	\$.63	\$. 52	\$	1.23	\$	1.09	
Diluted Earnings Per Share: Income Before Cumulative Effect of Accounting Change Cumulative Effect of Accounting Change	\$.62	\$.51	\$	1.20	\$	1.09	
Net Income	\$.62	\$.51	\$	1.20	\$	1.07	
Capital Expenditures	\$	198.2	\$	188.3	\$	379.3	\$	539.7	
Depreciation	\$ 		-	156.4		347.2			

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries CONSOLIDATED INCOME STATEMENTS (Unaudited)

(Millions of dollars, except per share)		Three Moi 31 I	Ended	Six Months Ended 31 March			
		2004	: 	2003 	 2004		2003
SALES COSTS AND EXPENSES	\$ 1	1,856.5	\$ 1	,578.1	\$ 3,541.4	\$ 3	3,025.1
Cost of sales	=	1,369.6	1	,176.3	2,599.8	:	2,209.3
Selling and administrative		250.4			481.8		399.9
Research and development Global cost reduction plans, net		32.0		31.1 (.2)	62.0		61.1 (.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 Cumulative effect of accounting change	\$. 63	\$.52	\$ 1.23	\$	1.11
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	\$		1.20	\$	1.07
WEIGHTED AVERAGE OF COMMON SHARES OUTSTANDING (in millions)		223.7			 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.

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited)

(Millions of dollars)		
	31 March 2004	30 September 2003
ASSETS		
CURRENT ASSETS Cash and cash items Trade receivables, less allowances for doubtful accounts Inventories and contracts in progress Other current assets	\$ 142.3 1,354.9 563.3 265.0	1,188.5 565.9
TOTAL CURRENT ASSETS	2,325.5	2,067.9
INVESTMENTS IN NET ASSETS OF AND ADVANCES TO EQUITY AFFILIATES PLANT AND EQUIPMENT, at cost	601.8	11,723.2
Less - Accumulated depreciation	6,284.7	6,086.1
PLANT AND EQUIPMENT, net	5,715.8	5,637.1
GOODWILL INTANGIBLE ASSETS, net OTHER NONCURRENT ASSETS	792.2 108.7 418.5	104.1
TOTAL ASSETS	,	\$ 9,431.9
======================================	:=======	========
CURRENT LIABILITIES Payables and accrued liabilities Accrued income taxes Short-term borrowings and current portion of long-term debt	\$ 1,173.8 73.1 652.7	115.6
TOTAL CURRENT LIABILITIES	1,899.6	1,581.2
LONG-TERM DEBT DEFERRED INCOME & OTHER NONCURRENT LIABILITIES DEFERRED INCOME TAXES	2,001.5 994.9 739.5	1,005.9
TOTAL LIABILITIES	5,635.5	5,461.3
MINORITY INTERESTS IN SUBSIDIARY COMPANIES	186.0	188.1
TOTAL SHAREHOLDERS' EQUITY	4,141.0	3,782.5
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	,	\$ 9,431.9

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(Millions	of	dollars)
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	Six Mont 31 Ma	ths Ended arch	
	2004	2003	
OPERATING ACTIVITIES			
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	
Subtotal	671.0		
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)		
0ther	(75.5)		
CASH PROVIDED BY OPERATING ACTIVITIES	372.0	440.1	
INVESTING ACTIVITIES			
Additions to plant and equipment (b)	(327.7)		
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)	
CASH USED FOR INVESTING ACTIVITIES	(367.6)	(494.1)	
FINANCING ACTIVITIES			
Long-term debt proceeds	147.3	50.2	
Payments on long-term debt	(152.3)	(60.2)	
Net increase (decrease) in commercial paper and 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	
CASH PROVIDED BY (USED FOR) FINANCING ACTIVITIES	56.2	(131.7)	
Effect of Exchange Rate Changes on Cash	5.5	5.4	
Increase (Decrease) in Cash and Cash Items Cash and Cash Items - Beginning of Year	66.1 76.2	(180.3) 253.7	
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.

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

(Millions of dollars, except per share)

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.

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.

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries SUMMARY BY BUSINESS SEGMENTS (Unaudited)

(Millions of dollars)										
	Three Months Ended 31 March 2004 2003					Six Months Ended 31 March 2004 2003				
Revenues from external customers Gases Chemicals Equipment	\$1	1,284.9 482.7 88.9	\$1	,129.5 398.5 50.1	\$2	,488.4 892.8 160.2	\$2	2,155.3 752.3 117.5		
Segment Totals	1	L,856.5	1	,578.1	3	,541.4	3	3,025.1		
Consolidated Totals	\$1	L,856.5	\$1	.,578.1	\$3	,541.4	\$3	3,025.1		
Operating income Gases Chemicals Equipment	\$	189.4 34.7 (.2)	•	150.2 33.7 3.0	\$	371.7 59.2 (.5)	•	318.2 66.8 7.1		
Segment Totals		223.9		186.9		430.4		392.1		
		(13.8)		(10.6)		(21.5)		(21.8)		
Consolidated Totals	\$	210.1	\$	176.3	\$	408.9	\$	370.3		
Equity affiliates' income Gases Chemicals Equipment	\$	19.0 2.9 .1	\$	14.6 .8 (.2)		36.7 4.8 .1	\$	31.8 3.3 .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)			- 	_	Marc 2004	h 30	Sept	ember 03		
Identifiable assets (a) Gases Chemicals Equipment					,250. ,412. 212.	9	67,09 1,47 17			

Segment Totals

Consolidated Totals

Corporate assets 484.3 131.6

8,876.4 8,746.8

\$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)

	31		Six Months Ended 31 March			
	2004	2003	2004	2003		
Revenues from external customers United States Canada	\$1,043.1 21.5	\$ 941.5 30.1	\$1,986.3 41.1	•		
Total North America	1,064.6	971.6	2,027.4	1,818.7		
United Kingdom Spain Other Europe		112.3 88.9 234.7	213.1	173.3		
Total Europe		435.9	1,075.6	843.5		
Asia Latin America All Other	181.3	145.6 24.9 .1				
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.

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MEDIA INQUIRIES:

Katie McDonald, tel: (610) 481-3673; e-mail: mcdonace@apci.com

INVESTOR INQUIRIES:

Alex Masetti, tel: (610) 481-7461; e-mail: masettaw@apci.com