

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) 17 March 2005

Air Products and Chemicals, Inc.
(Exact Name of Registrant as Specified in Charter)

Delaware

1-4534

23-1274455

(State or Other Jurisdiction (Commission File Number)
of Incorporation)

(IRS Employer
Identification No.)

7201 Hamilton Boulevard, Allentown, Pennsylvania

18195-1501

(Address of Principal Executive Offices)

(Zip Code)

(610) 481-4911

Registrant's telephone number, including area code

not applicable

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to
simultaneously satisfy the filing obligation of the registrant under any of the
following provisions (See General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 8.01 Other Events.

On March 17, 2005, the Board of Directors of Air Products and Chemicals, Inc. (the "Company") authorized the Company to repurchase up to \$500 million of its common stock and increased the quarterly dividend on the Company's common stock to 32 cents per share from 29 cents.

The Company issued a press release on March 18, 2005, announcing the repurchase plan and dividend increase. A copy of the press release is attached hereto as Exhibit 99.1, and is hereby incorporated by reference.

Item 9.01 Financial Statements and Exhibits.

99.1 Press Release dated March 18, 2005

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 hereunto duly authorized.

Air Products and Chemicals, Inc.

(Registrant)

Dated: 18 March 2005

By: /s/ Paul E. Huck

Paul E. Huck
Vice President and Chief Financial Officer

[AIR PRODUCTS LOGO]

News Release

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

AIR PRODUCTS INITIATES \$500 MILLION SHARE REPURCHASE PROGRAM
AND INCREASES QUARTERLY DIVIDEND 10 PERCENT

LEHIGH VALLEY, Pa. (March 18, 2005) - The Board of Directors of Air Products (NYSE:APD) today authorized a \$500 million share repurchase program, reflecting the company's strong financial position. The Board of Directors also increased the quarterly dividend on the company's stock to 32 cents per share from 29 cents, a 10% increase.

"Air Products continues to take steps to return cash to our shareholders while investing strategically in our growth businesses to further build our leadership positions," said John P. Jones, chairman and chief executive officer. "The combination of the share repurchase and the dividend increase reflects strong earnings and cash flows driven by our stable businesses, the growth markets and geographies we serve, and our capital discipline."

The company currently expects that the majority of its share repurchase program will be completed during calendar 2005, subject to market conditions. The company plans to repurchase shares of its common stock from time to time in the open market, under a Rule 10b5-1 plan, or through negotiated or accelerated share repurchase transactions.

The dividend is payable on May 9, 2005 to shareholders of record at the close of business on April 1, 2005. It marks the 23rd consecutive year that Air Products has increased its dividend payment.

Air Products' common stock trades on the New York Stock Exchange and the Pacific Stock Exchange. The company 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 and is listed in the Dow Jones Sustainability and FTSE4Good Indices. The company has annual revenues of \$7.4 billion, operations in over 30 countries, and nearly 20,000 employees around the globe. For more information, visit www.airproducts.com.

***NOTE: This release may contain forward-looking statements. Actual results could vary materially, due to changes in current expectations.

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