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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):

April 22, 2010

**Air Products and Chemicals, Inc.**

\_\_\_\_\_  
(Exact name of registrant as specified in its charter)

Delaware

1-4534

23-1274455

\_\_\_\_\_  
(State or other jurisdiction  
of incorporation)

\_\_\_\_\_  
(Commission  
File Number)

\_\_\_\_\_  
(I.R.S. Employer  
Identification No.)

7201 Hamilton Boulevard, Allentown, Pennsylvania

18195-1501

\_\_\_\_\_  
(Address of principal executive offices)

\_\_\_\_\_  
(Zip Code)

Registrant's telephone number, including area code:

610 481-4911

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:

- 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))
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**Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.**

Charles H. Noski notified Air Products and Chemicals, Inc. (the "Company") that he will resign from the Company's Board of Directors effective May 10, 2010 due to his assumption of a new position as executive vice president and chief financial officer of Bank of America Corporation. No disagreement exists between the Company and Mr. Noski.

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**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.

*April 27, 2010*

Air Products and Chemicals, Inc.

By: *Paul E. Huck*

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*Name: Paul E. Huck*

*Title: Senior Vice President and Chief Financial Officer*