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): February 3, 2011

Air Products and Chemicals, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation)

1-4534 (Commission File Number)

23-1274455 (IRS Employer Identification No.)

7201 Hamilton Boulevard Allentown, Pennsylvania 18195-1501 (Address of principal executive offices, including 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:

Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425) 0

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)) 0

Item 1.01 Entry Into a Material Definitive Agreement.

On February 3, 2011, Air Products and Chemicals, Inc. ("APCI") entered into an amended and restated credit agreement with JPMorgan Chase Bank, N.A., as administrative agent, and the other lenders named therein, providing for an amended term loan credit facility (the "Amended Acquisition Facility") to APCI in an aggregate amount of up to \$6.724 billion. The Amended Acquisition Facility replaces in its entirety the credit agreement dated as of March 31, 2010 among APCI, J.P. Morgan Chase Bank, N.A., as administrative agent, and the other lenders named therein. The terms and conditions of the Amended Acquisition Facility are summarized in Amendment No. 54 to the Schedule TO filed by APCI and Air Products Distribution, Inc. with the SEC on February 3, 2011, which filing is hereby incorporated herein by refer ence. A copy of the Amended Acquisition Facility is filed as an exhibit to Amendment No. 54 to the Schedule TO.

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.

By: /s/ Paul E. Huck

Name: Paul E. Huck Title: Senior Vice President and Chief Financial Officer

Date: February 3, 2011