FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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hours per response:

OMB Number: 3235-0287 Estimated average burden

0.5

## Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b)

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting Person*   |   |  |   |                                       |  | 2. Issuer Name <b>and</b> Ticker or Trading Symbol AIR PRODUCTS & CHEMICALS INC /DE/                     |  |  |                       |             |   |                 |   |  | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) |  |  |   |  |
|--|---|--|---|---------------------------------------|--|--|--|--|-----------------------|-------------|---|-----------------|---|--|---|--|--|---|--|
| DAVIS WILLIAM L  |   |  |   |                                       |  | APD ]  |  |  |                       |             |   |                 |   | Director   |   |  | 10% Owi  | ner                                     |  |
| (Last) (First) (Middle)  |   |  |   | _ [                                   |  |  |  |  |                       |             |   |                 |   | Officer (  | give title  |  | Other (sp<br>below)  | ecify                                   |  |
| (Last) (First) (Middle) 7201 HAMILTON BOULEVARD  |   |  |   |                                       | Date of Earliest Transaction (Month/Day/Year)            |  |  |  |                       |             |   |                 |   | ,  |   |  | ,  |   |  |
| /201 IIA   | WILLOW  | - 1  | 03/31/2010  |                                       |  |  |  |  |                       |             |   |                 |   |  |   |  |  |   |  |
| (Street)   |   |  |   |                                       | 4. If Amendment, Date of Original Filed (Month/Day/Year) |  |  |  |                       |             |   |                 |   | 6. Individual or Joint/Group Filing (Check Applicable Line)  |   |  |  |   |  |
| ALLENTOWN  |   | PA 18195                                   |   |                                       |  |  |  |  |                       |             |   | K Form file     | ed by One   | Report   | ing Person  |  |  |   |  |
|  |   |  |   | -                                     |  |  |  |  |                       |             |   |                 |   | Form file  | ed by More  | than (   | One Reportir   | ng Person                               |  |
| (City)   | (5  | State)                                     | (Zip)   |                                       |  |  |  |  |                       |             |   |                 |   |  |   |  |  |   |  |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned   |   |  |   |                                       |  |  |  |  |                       |             |   |                 |   |  |   |  |  |   |  |
| Da   |   |  |   | Transaction<br>ate<br>lonth/Day/Year) |  | 2A. Deemed<br>Execution Date<br>if any<br>(Month/Day/Yea   |  | Code (Instr.   |                       | on 🗀        | 4. Securities Acquired (A) of Disposed Of (D) (Instr. 3, 4                        |                 |   | Beneficial<br>Owned Fo   | Form:<br>y (D) or   |  | Direct Ir<br>Indirect B<br>tr. 4) C                                | . Nature of ndirect eneficial bwnership |  |
|  |   |  |   |                                       |  |  |  |  | Code V                |             | Amount  | (A) or<br>(D)   | Price   | Transactio   | Reported<br>Transaction(s)<br>(Instr. 3 and 4)                          |  | "  | nstr. 4)                                |  |
| Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |   |  |   |                                       |  |  |  |  |                       |             |   |                 |   |  |   |  |  |   |  |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)  | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year) | 4.<br>Transaction<br>Code (Instr.     |  | 5. Number of<br>Derivative<br>Securities<br>Acquired (A)<br>or Disposed<br>of (D) (Instr.<br>3, 4 and 5) |  | 6. Date Exercisable and<br>Expiration Date<br>(Month/Day/Year) |                       |             | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) |                 | 8. Price of<br>Derivative<br>Security<br>(Instr. 5) | 9. Number of<br>derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s) |   | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |   |  |
|  |   |  |   | Code                                  | v  | (A)  |  | Date<br>Exer   | cisable               | Exp<br>Date | piration<br>e   | Title           | Amount<br>or<br>Number<br>of Shares                 |  | (Instr. 4)  |  |  |   |  |
| Phantom<br>Stock <sup>(1)</sup>  | (2)   | 03/31/2010                                 |   | A                                     |  | 51.0218  |  | 08/08  | 8/1988 <sup>(3)</sup> | 08/0        | 08/1988 <sup>(3)</sup>  | Common<br>Stock | 51.0218   | \$0  | 9,769.7   | 538  | D  |   |  |

### **Explanation of Responses:**

- 1. Phantom deferred stock units (Units) acquired under the Air Products Stock Account of the issuer's Deferred Compensation Program for Directors, of the Company's Long-Term Incentive Plan (the Plan).
- 2. Not applicable to this security
- 3. These units are payable in the form of shares of common Stock equal in number to the units, at the time elected by the reporting person, which is generally after service on the issuer's Board of Directors ends. Units may be paid in a lump sum or up to ten installments as elected by the reporting person in advance.

# Remarks:

Linda M. Svoboda as Attorney

in Fact

\*\* Signature of Reporting Person Date

04/01/2010

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- $^{\star}$  If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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