FORM 4

## **UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

| OMB APPROVAL        |           |  |  |  |  |  |  |  |  |
|---------------------|-----------|--|--|--|--|--|--|--|--|
| OMB Number:         | 3235-0287 |  |  |  |  |  |  |  |  |
| Estimated average b | urden     |  |  |  |  |  |  |  |  |

0.5

hours per response

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* SMITH LAWRENCE S |   |  |  |                                   | 2. Issuer Name <b>and</b> Ticker or Trading Symbol AIR PRODUCTS & CHEMICALS INC /DE/ |  |   |  |                                   |             |   |  |          | (Check                         | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) |  |                                       |  |  |  |
|---|---|--|--|-----------------------------------|--|--|---|--|-----------------------------------|-------------|---|--|----------|--------------------------------|---|--|---------------------------------------|--|--|--|
| DIVITI  | Lilivi  | <u>EITCE 0</u>                             |  |                                   |  | ]  |   |  |                                   |             |   |  |          | X                              | Director  | to a state   |                                       | 10% Ow   |  |  |
| (Last)  | (First) (Middle)  |  |  |                                   |  |  |   |  |                                   |             |   |  |          |                                | Officer (give title below)  |  |                                       | Other (specify below)  |  |  |
| 7201 HAMILTON BOULEVARD                                   |   |  |  |                                   | 3. Date of Earliest Transaction (Month/Day/Year) 12/31/2008                          |  |   |  |                                   |             |   |  |          |                                |   |  |                                       |  |  |  |
| (Street) ALLENTOWN PA 18195                               |   |  |  |                                   | 4. If Amendment, Date of Original Filed (Month/Day/Year)                             |  |   |  |                                   |             |   |  | 6. Indiv |                                |   |  |                                       |  |  |  |
| (City)  |   | (State)                                    | (Zip)  |                                   |  |  |   |  |                                   |             |   |  |          |                                | Form file   | Form filed by More than Or   |                                       |  | ie Reporting Person  |  |
|   |   |  | Table I - Non-   | Deriva                            | ative \$   | Securiti   | es A  | cqı  | uired, D                          | Disp        | osed of   | , or B                                   | ene      | icially C                      | wned  |  |                                       |  |  |  |
| 1. Title of Security (Instr. 3)  2. Trans Date (Month/I   |   |  |  |                                   |  | Execution if any   | 2A. Deemed<br>Execution Dai<br>if any<br>(Month/Day/Y |  | 3.<br>Transact<br>Code (In:<br>8) | tion        |   | es Acquired (A) o<br>Of (D) (Instr. 3, 4 |          |                                |   |  | 6. Owr<br>Form:<br>(D) or<br>(I) (Ins | Direct I<br>Indirect E<br>tr. 4)   | 7. Nature of<br>Indirect<br>Beneficial<br>Ownership<br>(Instr. 4)  |  |
|   |   |  |  |                                   |  |  |   |  | Code                              | v           | Amount  | (A)<br>(D)                               |          | Price                          | Transaction(s)<br>(Instr. 3 and 4)                                      |  |                                       |  |  |  |
|   |   |  | Table II - D<br>(e   |                                   |  | ecurities<br>alls, wa  |   |  |                                   |             |   |  |          |                                | ned   |  |                                       |  |  |  |
| 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. 3,<br>4 and 5) |   | 6. Date Exercisable<br>Expiration Date<br>(Month/Day/Year) |                                   |             | e and 7. Title and<br>Securities<br>Derivative<br>(Instr. 3 and |  | ties U   | nderlying<br>ecurity           | 8. Price of<br>Derivative<br>Security<br>(Instr. 5)                     | 9. Numb<br>derivativ<br>Securitie<br>Benefici<br>Owned<br>Followin<br>Reporter | re<br>es<br>ally<br>ng<br>d           | 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)  | (D)   | Date<br>Exe  | e<br>rcisable                     | Exp<br>Date | iration<br>e  | Title                                    |          | mount or<br>lumber of<br>hares |   | Transact<br>(Instr. 4)   |                                       |  |  |  |
| Phantom<br>Stock <sup>(1)</sup>                           | \$0 <sup>(2)</sup>  | 12/31/2008                                 |  | A                                 |  | 712.2812   |   | 08/0   | 08/1988 <sup>(3)</sup>            | 08/0        | 08/1988 <sup>(3)</sup>  | Commo                                    |          | 12.2812                        | \$47.51   | 12,281.  | .5339                                 | 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). Under the Plan, all non-employee directors are credited with Units for the portion of their Board retainer required to be received in this form and they are permitted to defer receiving payment of all or a portion of the remainder of their Board and Committee retainers and meeting fees.
- 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 01/05/2009 in Fact

\*\* Signature of Reporting Person

Date

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.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.