

## INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

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* <u>Marsland John W</u>	2. Date of Event Requiring Statement (Month/Day/Year) 02/01/2010	3. Issuer Name and Ticker or Trading Symbol <u>AIR PRODUCTS &amp; CHEMICALS INC /DE/ [ APD ]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below)  Sr. V.P.	5. If Amendment, Date of Original Filed (Month/Day/Year)
(Last) (First) (Middle) 7201 HAMILTON BOULEVARD			6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person
(Street) ALLENTOWN PA 18195			
(City) (State) (Zip)			

## Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	11,077	D	
Common Stock	846.26	I	By RSP <sup>(1)</sup>

## Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Deferred Stock Units <sup>(2)</sup>	08/08/1988 <sup>(3)</sup>	08/08/1988 <sup>(3)</sup>	Common Stock	1,094.875	0 <sup>(4)</sup>	D	
Stock Option (Right to Buy) <sup>(5)</sup>	08/08/1988 <sup>(6)</sup>	10/02/2012	Common Stock	11,000	43.09	D	
Stock Option (Right to Buy) <sup>(5)</sup>	08/08/1988 <sup>(6)</sup>	10/02/2013	Common Stock	12,000	45.53	D	
Stock Option (Right to Buy) <sup>(5)</sup>	08/08/1988 <sup>(6)</sup>	10/01/2014	Common Stock	12,000	54.17	D	
Stock Option (Right to Buy) <sup>(5)</sup>	08/08/1988 <sup>(6)</sup>	10/03/2015	Common Stock	7,600	55.33	D	
Stock Option (Right to Buy) <sup>(5)</sup>	08/08/1988 <sup>(6)</sup>	10/01/2018	Common Stock	12,069	66.9	D	
Stock Option (Right to Buy) <sup>(5)</sup>	08/08/1988 <sup>(6)</sup>	10/02/2016	Common Stock	8,000	67.23	D	
Stock Option (Right to Buy) <sup>(5)</sup>	08/08/1988 <sup>(6)</sup>	12/01/2019	Common Stock	7,812	83.6	D	
Stock Option (Right to Buy) <sup>(5)</sup>	08/08/1988 <sup>(6)</sup>	10/01/2017	Common Stock	6,691	98.85	D	

## Explanation of Responses:

- Shares represented by units of interest in the Company Stock Fund held under the issuer's Retirement Savings Plan.
- Deferred Stock Units (Units) acquired under the Air Products and Chemicals, Inc. Deferred Compensation Plan.
- The Units are generally payable in the form of shares of Common Stock equal in number to the Units, after the reporting person's term of employment ends, in a lump sum or up to 10 installments as elected by the reporting person in advance.
- Not applicable to this security
- Employee Stock Options granted under the issuer's Long-Term Incentive Plan.
- These options become exercisable in one-third increments on the first three anniversaries of grant.

## Remarks:

Linda M. Svoboda as Attorney 02/05/2010  
in Fact

\*\* Signature of Reporting Person Date

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

\* If the form is filed by more than one reporting person, see Instruction 5 (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.