FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

|   | OMB APPROVAL             |           |  |  |  |  |  |  |  |  |  |
|---|--------------------------|-----------|--|--|--|--|--|--|--|--|--|
|   | OMB Number:              | 3235-0287 |  |  |  |  |  |  |  |  |  |
| l | Estimated average burden |           |  |  |  |  |  |  |  |  |  |
| l | hours por rosponso:      | 0.5       |  |  |  |  |  |  |  |  |  |

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

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*  RADEMACHER MICHAEL L        |  |  |   |  | 2. Issuer Name and Ticker or Trading Symbol POLYONE CORP [ POL ] |          |   |  |                              |  |   | (Che  | elationship o<br>eck all applic<br>Director   | able)                             | g Pers   | on(s) to Issi<br>10% Ov<br>Other (s      | vner |
|---|--|--|---|--|--|----------|---|--|------------------------------|--|---|---|---|-----------------------------------|--|--|------|
| (Last) (First) (Middle) POLYONE CENTER                                |  |  |   |  | 3. Date of Earliest Transaction (Month/Day/Year) 01/05/2005      |          |   |  |                              |  |   |   | below)  |                                   | Mana   | below) ger - Distr                       | ·    |
| 33587 WALKER ROAD  (Street)  AVON LAKE OH 44012  (City) (State) (Zip) |  |  | 4. If   | 4. If Amendment, Date of Original Filed (Month/Day/Year) |  |          |   |  |                              |  | Line  | ndividual or Joint/Group Filing (Check Applicable e)  X Form filed by One Reporting Person Form filed by More than One Reporting Person |   |                                   |  |  |      |
|   |  | Tabl                                       | e I - Non-De  | rivative   | Sec  | curities | Acc   | quired, D  | isp                          | osed of  | , or Ben  | eficially   | / Owned   |                                   |  |  |      |
| Date  |  |  |   | ransaction<br>e<br>nth/Day/Ye                            | Execution Date,  |          | 3.<br>Transaction<br>Code (Instr. b)<br>8) 4. Securities Acqui<br>Disposed Of (D) (In |  | es Acquired<br>Of (D) (Insti | d (A) or<br>: 3, 4 and   | 5. Amoun<br>Securities<br>Beneficia<br>Owned Fo | s<br>lly<br>ollowing  | Form<br>(D) or  | : Direct<br>r Indirect<br>str. 4) | 7. Nature of<br>Indirect<br>Beneficial<br>Ownership                      |  |      |
|   |  |  |   |  |  |          | Code V  | ,  | Amount                       | (A) or<br>(D)  | Price   | Transacti<br>(Instr. 3 a  |   |                                   |  | (Instr. 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) | Code (   |  |          |   | 6. Date Exercisable and<br>Expiration Date<br>(Month/Day/Year) |                              | 7. Title and Amoun<br>of Securities<br>Underlying<br>Derivative Security<br>(Instr. 3 and 4) |   | 8. Price of<br>Derivative<br>Security<br>(Instr. 5)   | 9. Numbe<br>derivative<br>Securities<br>Beneficia<br>Owned<br>Following<br>Reported<br>Transactie<br>(Instr. 4) | e<br>S<br>Illy                    | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | Beneficial<br>Ownership<br>ct (Instr. 4) |      |
|   |  |  |   | Code   | v  | (A)      | (D)   | Date<br>Exercisable  |                              | Expiration<br>Date   | Title   | Amount<br>or<br>Number<br>of<br>Shares  |   |                                   |  |  |      |
| Stock<br>Appreciation<br>Right  | \$8.94   | 01/05/2005                                 |   | A  |  | 17,700   |   | (1)  | C                            | 01/04/2012   | Common<br>Stock                                 | 17,700  | \$0   | 17,70                             | 0  | D  |      |

## **Explanation of Responses:**

1. SARs are exercisable upon vesting. Vesting occurs when the market price of the PolyOne common stock reaches pre-determined levels for three consecutive days as follows: 1/3 vest at a market price of \$9.84 per share; an additional 1/3 vests at a market price of \$10.73 per share; and the remaining 1/3 vests at a market price of \$11.63 per share.

By: Wendy C. Shiba, Power of

Attorney For: Michael L.

Rademacher

01/07/2005

\*\* 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.