

OMB APPROVAL	
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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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* <u>ROSENAU ROBERT M</u> (Last) (First) (Middle) <u>POLYONE CENTER</u> <u>33587 WALKER ROAD</u> (Street) <u>AVON LAKE OH 44012</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>POLYONE CORP [POL]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>VP & General Manager - Vinyl</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>12/30/2004</u>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	12/30/2004		M		27,500	A	\$6.14	40,342	D	
Common Stock	12/30/2004		F		21,772	D	\$9.22	18,570	D	
Common Stock								8,932	I	Savings Plan Trust ⁽¹⁾

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date						Title
Stock Appreciation Right	\$6.14	12/30/2004		M			27,500	(2)	12/10/2006	Common Stock	27,500	\$0	14,170	D	

Explanation of Responses:

- The information in this report is based on a PolyOne Retirement Savings Plan statement dated as of September 30, 2004. PolyOne common shares are held in a unitized fund that consists of stock and cash. The number of shares and the amount of cash may fluctuate daily depending on plan level activity in the fund. Even though no transaction has occurred, this fluctuation may result in a decrease in the number of shares held since the last report filed by the reporting person.
- 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 vests at a market price of \$8 per share; an additional 1/3 vests at a market price of \$9 per share; and the remaining 1/3 vests at a market price of \$10 per share.

By: Wendy C. Shiba, Power of Attorney For: Robert M. Rosenau 01/03/2005

** 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 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.