

Rajendra Ajita G
 Form 4
 February 10, 2012

FORM 4

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549**

OMB APPROVAL

OMB Number: 3235-0287
 Expires: January 31, 2005
 Estimated average burden hours per response... 0.5

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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 Rajendra Ajita G

(Last) (First) (Middle)

A. O. SMITH CORPORATION, 500
 TENNESSEE WALTZ PARKWAY

(Street)

ASHLAND CITY, TN 37015

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol
 SMITH A O CORP [AOS]

3. Date of Earliest Transaction (Month/Day/Year)
 02/09/2012

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director 10% Owner
 Officer (give title below) Other (specify below)
 President & COO

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 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)
				(A) or (D)	Price		
Common Stock	02/09/2012		M	A	\$ 9,150 (1) 45.588	59,028	D
Common Stock	02/10/2012		S	D	\$ 2,964 (2) 45.588	56,064	D

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

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SEC 1474
 (9-02)

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**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 (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price or Value of Derivative Security (Instr. 3, 4, and 5)
Restricted Stock Units	(1)	02/09/2012		M	9,150	(1) (1)	Common Stock	9,150

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Rajendra Ajita G A. O. SMITH CORPORATION 500 TENNESSEE WALTZ PARKWAY ASHLAND CITY, TN 37015			President & COO	

Signatures

James F. Stern, Attorney-in-Fact for Ajita G.
Rajendra 02/10/2012

**Signature of Reporting Person Date

Explanation of Responses:

* 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).

- (1) 9,150 Restricted Stock Units were granted on 02/09/2009, under the A. O. Smith Combined Incentive Compensation Plan, a transaction exempt under Rule 16b-3. 9,150 Restricted Stock Units vested on 02/09/2012. As of result of vesting, the Company is obligated to deliver 9,150 shares of Common Stock to the reporting person.
- (2) The reporting person sold these shares to obtain funds to pay the withholding taxes due as a result of the vesting of the restricted stock units described in footnote (1).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.