

La Force Andrew Hudson III
 Form 4
 November 20, 2012

FORM 4 UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

OMB APPROVAL

OMB Number: 3235-0287
 Expires: January 31, 2015
 Estimated average burden hours per response... 0.5

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 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 *
 La Force Andrew Hudson III

2. Issuer Name and Ticker or Trading Symbol
 W R GRACE & CO [GRA]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)
 C/O W. R. GRACE & CO., 7500 GRACE DRIVE

3. Date of Earliest Transaction (Month/Day/Year)
 11/19/2012

____ Director _____ 10% Owner
 Officer (give title below) _____ Other (specify below)
 Sr. VP and CFO

(Street)
 COLUMBIA, MD 21044

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

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) |
|---|--------------------------------------|--|--------------------------------|---|---|--|---|
| Common Stock, par value \$0.01 per share ⁽¹⁾ | 11/19/2012 | | M | 18,457 A | \$ 19.71 68,457 | D | |
| Common Stock, par value \$0.01 per share ⁽¹⁾ | 11/19/2012 | | S | 18,457 D | \$ 63.4688 50,000 | D | |

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

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 control number.

SEC 1474
(9-02)

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 Underlying Securities (Instr. 3 and 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|
| | | | | Code | V (A) (D) | Date Exercisable Expiration Date | Title Amount or Number of Shares |
| Employee Stock Options (rights to buy) | \$ 19.71 | 11/19/2012 | | M | 18,457 | 03/01/2011 09/11/2013 | Common Stock ⁽¹⁾ 18,457 |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|----------------|-------|
| | Director | 10% Owner | Officer | Other |
| La Force Andrew Hudson III C/O W. R. GRACE & CO. 7500 GRACE DRIVE COLUMBIA, MD 21044 | | | Sr. VP and CFO | |

Signatures

Michael W. Conron,
Attorney-in-Fact

11/20/2012

__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) Each share of Common stock also represents one Preferred Share Purchase Right. Each such Right entitles the holder to purchase Preferred Stock or other securities or property upon the occurrence of certain events and subject to certain conditions.

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.