

Barnard Douglas C
 Form 4
 August 12, 2010

FORM 4

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

OMB APPROVAL

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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 *
 Barnard Douglas C

2. Issuer Name and Ticker or Trading Symbol
 CF Industries Holdings, Inc. [CF]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)

3. Date of Earliest Transaction
 (Month/Day/Year)
 08/10/2010

____ Director _____ 10% Owner
 Officer (give title below) _____ Other (specify below)
 VP, Gen. Counsel & Secretary

C/O CF INDUSTRIES HOLDINGS, INC., 4 PARKWAY NORTH, SUITE 400

(Street)

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

DEERFIELD, IL 60015

(City) (State) (Zip)

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 Ownership (Instr. 4) |
|--|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|
| | | | Code | V | Amount or Price | | |
| Common stock, par value \$0.01 per share | 08/10/2010 | | A | | 2,300 A \$ 0 | 20,564 | D |
| Common stock, par value \$0.01 per share | 08/10/2010 | | F | | 737 D \$ 81.3 | 19,827 | D |

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

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(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) | 8. Amount or Number of Shares |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|-------------------------------|
| Employee Stock Option (right to buy) | \$ 81.3 | 08/10/2010 | | A | 6,600 | <u>(1)</u> 08/10/2020 | Common stock, par value \$0.01 per share | 6,600 |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|--|---------------|-----------|------------------------------|-------|
| | Director | 10% Owner | Officer | Other |
| Barnard Douglas C C/O CF INDUSTRIES HOLDINGS, INC. 4 PARKWAY NORTH, SUITE 400 DEERFIELD, IL 60015 | | | VP, Gen. Counsel & Secretary | |

Signatures

/s/ Douglas C. Barnard 08/12/2010

**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) The options vest in three equal installments on August 10, 2011, 2012, and 2013.

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.