

CF Industries Holdings, Inc.  
 Form 4  
 August 12, 2008

**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 \*  
 Chase Stephen G

(Last) (First) (Middle)

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

(Street)

DEERFIELD, IL 60015

(City) (State) (Zip)

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

3. Date of Earliest Transaction  
 (Month/Day/Year)  
 08/11/2008

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)  
 VP, Corporate Planning

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			
				Code	V	Amount		
Common stock, par value \$0.01 per share	08/11/2008		M <sup>(1)</sup>	20,000	A	\$ 16	30,093	D
Common stock, par value \$0.01 per share	08/11/2008		S <sup>(1)</sup>	20,000	D	\$ 133.2008	10,093	D
	08/11/2008		M <sup>(1)</sup>	3,900	A	\$ 14.83	13,993	D

Common stock, par value \$0.01 per share

Common stock, par value \$0.01 per share  
 08/11/2008 S<sup>(1)</sup> 3,900 D \$ 133.2008 10,093 D

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

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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 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 Option (right to buy)	\$ 16	08/11/2008		M <sup>(1)</sup>	20,000	<sup>(2)</sup> 08/10/2015	Common stock, par value \$0.01 per share 20,000
Employee Stock Option (right to buy)	\$ 14.83	08/11/2008		M <sup>(1)</sup>	3,900	<sup>(3)</sup> 08/10/2016	Common stock, par value \$0.01 per share 3,900

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other

Chase Stephen G  
C/O CF INDUSTRIES HOLDINGS, INC.  
4 PARKWAY NORTH, SUITE 400  
DEERFIELD, IL 60015

VP,  
Corporate  
Planning

## Signatures

/s/ Douglas C. Barnard, by power of  
attorney

08/12/2008

\_\_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 sales reported in this Form 4 were effected pursuant to Rule 10b5-1 trading plans adopted by the reporting person on May 16, 2008.
- (2) The options vest in three equal installments on August 10, 2006, 2007, and 2008.
- (3) The options vest in three equal installments on August 10, 2007, 2008, and 2009.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

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