CF Industries Holdings, Inc.

Form 4

February 21, 2007

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

OMB APPROVAL OMB

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obligations may continue.

(Middle)

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 See Instruction

1(b).

(Last)

(Print or Type Responses)

1. Name and Address of Reporting Person * Eppel William G

2. Issuer Name and Ticker or Trading Symbol

5. Relationship of Reporting Person(s) to Issuer

CF Industries Holdings, Inc. [CF]

(Check all applicable)

C/O CF INDUSTRIES HOLDINGS.

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

02/20/2007

Director 10% Owner Other (specify X_ Officer (give title below)

INC., ONE SALEM LAKE DRIVE

(Street)

(First)

4. If Amendment, Date Original

VP, Human Resources 6. Individual or Joint/Group Filing(Check

Applicable Line)

Filed(Month/Day/Year) _X_ Form filed by One Reporting Person Form filed by More than One Reporting Person

LONG GROVE, IL 60047

(City)	(State)	(Zip) Tabl	e I - Non-D	Derivative S	Securi	ities Acqu	ired, Disposed of	, or Beneficiall	y 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. Securit on(A) or Dis (Instr. 3, 4	sposed	of (D)	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	02/20/2007		M	11,089	A	\$ 16	15,389	D	
Common stock, par value \$0.01 per share	02/20/2007		S	11,089	D	\$ 36.36	4,300	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. Transactic Code (Instr. 8)	5. Number of ionDerivative 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	02/20/2007		M		11,089	<u>(1)</u>	08/10/2015	Common stock, par value \$0.01 per share	11,089

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Eppel William G

C/O CF INDUSTRIES HOLDINGS, INC. ONE SALEM LAKE DRIVE LONG GROVE, IL 60047

VP, Human Resources

Signatures

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

02/21/2007

Date

**Signature of Reporting Person

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, 2006, 2007, and 2008.

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.

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