Will W Anthony Form 4 August 31, 2012

FORM 4

Check this box

if no longer

subject to

Section 16.

Form 4 or

obligations

may continue.

See Instruction

Form 5

1(b).

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

OMB APPROVAL OMB

3235-0287 Number: January 31,

Expires: 2005 Estimated average

10% Owner

Other (specify

0.5

burden hours per response...

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

(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

SECURITIES

(Print or Type Responses)

1. Name and Address of Reporting Person *

Will W Anthony

2. Issuer Name and Ticker or Trading Symbol

CF Industries Holdings, Inc. [CF]

(First) (Last)

3. Date of Earliest Transaction

08/29/2012

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

(Street)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Month/Day/Year) Director X_ Officer (give title below)

below) Sr. VP, Manufacturing & Dist.

4. If Amendment, Date Original 6. Individual or Joint/Group Filing(Check Filed(Month/Day/Year)

Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting

DEERFIELD, IL 60015

(City) (State) (Zip)

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of 2. Transaction Date 2A. Deemed 3. 4. Securities 5. Amount of 6. Ownership 7. Nature of Security (Month/Day/Year) Execution Date, if TransactionAcquired (A) or Securities Form: Direct Indirect (Instr. 3) Code Disposed of (D) Beneficially (D) or Indirect Beneficial (Instr. 3, 4 and 5) (Month/Day/Year) (Instr. 8) Owned (I) Ownership (Instr. 4) Following (Instr. 4)

> Reported (A) Transaction(s) or (Instr. 3 and 4)

Code V Amount (D) Price

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

Persons who respond to the collection of SEC 1474 information contained in this form are not (9-02)required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

3. Transaction Date 3A. Deemed 6. Date Exercisable and 1. Title of 5. Number of 7. Title and Amount of 8. Pr (Month/Day/Year) Execution Date, if TransactionDerivative **Expiration Date Underlying Securities** Conversion

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Security (Instr. 3)	or Exercise Price of Derivative Security		any (Month/Day/Year)	Code (Instr. 8	nstr. 8) Acquired (A or Disposed (D) (Instr. 3, 4, and 5)		(A) ed of			(Instr. 3 and 4)		Secu (Inst
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	
Phantom Stock	<u>(1)</u>	08/29/2012		A		0.7013		<u>(1)</u>	<u>(1)</u>	Common stock, par value \$0.01 per share	0.7013	\$ 2

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Will W Anthony C/O CF INDUSTRIES HOLDINGS, INC. 4 PARKWAY NORTH, SUITE 400 DEERFIELD, IL 60015

Sr. VP, Manufacturing & Dist.

Signatures

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

08/31/2012

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).

Each share of phantom stock is the economic equivalent of one share of CF Industries Holdings, Inc. common stock. Shares of phantom (1) stock are payable in cash following the reporting person's termination of employment with CF Industries Holdings, Inc. and may be transferred by the reporting person into an alternative investment account in accordance with the terms of the plan.

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.

Reporting Owners 2