FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

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hours per response:	0.5

1. Name and Address of Reporting Person*			2. Issuer Name and Ticker or Trading Symbol ARCH COAL INC [ACI]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)					
CLast)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) 03/15/2011	x	Director Officer (give title below) Sr. V.P. and	10% Owner Other (specify below) CFO			
SUITE 300			4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable					
(Street) ST. LOUIS	МО	63141		Line) X	,				
(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. Transa Code (8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			Securities Beneficially	(D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership
			Code	v	Amount	(A) or (D)	Price	Transaction(s) (Instr. 3 and 4)		(Instr. 4)

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. Transa Code (8)		of		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)			9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	v	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Phantom Stock	(1)	03/15/2011		A		9		(2)	(2)	Common Stock	9	\$33.67	3,035	D	

Explanation of Responses:

1. Each share of phantom stock represents a right to receive the value in cash of one share of Arch Coal, Inc. common stock. The shares of phantom stock are held by the executive officer through the Arch Coal, Inc. Deferred Compensation Plan (the "Plan"). The shares of phantom stock acquired by the executive officer represent dividends attributable to amounts that the executive officer elected to defer under the Plan into a hypothetical investment in shares of Arch Coal, Inc. common stock.

2. Shares of phantom stock are payable in cash on the date or dates elected by the executive officer, subject to the terms of the Plan. The executive officer may transfer any and all of the phantom stock account into an alternative investment account at any time.

Remarks:



03/16/2011

** Signature of Reporting Person Date

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

* 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).

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

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 Number.
