FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

1. Name and Address of Reporting Person*					2. Issuer Name and Ticker or Trading Symbol ARCH COAL INC [ACI]							heck all appl Direct	,	erson(s) to Iss 10% O Other (s	wner
(Last) (First) (Middle) CITYPLACE ONE SUITE 300				09	3. Date of Earliest Transaction (Month/Day/Year) 09/15/2009							below V) " P-Marketing	below)	. ,
(Street) ST. LOUIS MO 63144 (City) (State) (Zip)				4.	4. If Amendment, Date of Original Filed (Month/Day/Year)						6. Lir	ne) X Form Form	′		
	Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned														
1. Title of Security (Instr. 3) 2. Transac Date (Month/Date)					2A. Deemed Execution Date,			Code (Ins	ion Dispos str. 5)	urities Acquired (A) ed Of (D) (Instr. 3, 4		Benefic	es Fo ially (D) Following (I) ed etion(s)	rm: Direct or Indirect (Instr. 4)	7. Nature of Indirect Beneficial Ownership (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)	Code	Transaction Code (Instr.		mber vative rities iired r osed) r. 3, 4	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	Beneficial Ownership (Instr. 4)
				Code	v	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Phantom Stock	(1)	09/15/2009		A		12		(2)	(2)	Common Stock	12	\$21.6 ⁽¹⁾	2,953	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 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:

/s/ Gregory A. Billhartz, 09/17/2009 Attorney-in-Fact

** 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.