## FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

OMB APPROVAL OMB Number: Estimated average burden hours per response: 0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b). 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* <u>Taylor Wes M</u>						2. Issuer Name <b>and</b> Ticker or Trading Symbol ARCH COAL INC [ ACI ]									elationship ck all appl Direct	icable)	Person(s) to	Issuer Owner
(Last) (First) (Middle) ONE CITYPLACE DRIVE						3. Date of Earliest Transaction (Month/Day/Year) 12/31/2007									Office below	r (give title )	Othe below	(specify /)
(Street) ST. LOU (City)	ST. LOUIS MO 63141				4. If	4. If Amendment, Date of Original Filed (Month/Day/Year)							6. Inc Line)	′				
Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned																		
1. Title of Security (Instr. 3)  2. Transac Date (Month/Date)						Execution Date			e, Transaction Dispos Code (Instr. 5)		Dispose	rities Acqu ed Of (D) (Ir			5. Amou Securiti Benefic Owned Reporte	es ially Following	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership
								Code	v	Amount	(A) or (D)		rice	Transac (Instr. 3	tion(s)		(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 D if any (Month/Day	Date, 1	1. Fransa Code (1 3)		of		6. Date Exe Expiration (Month/Day		7. Title and Amount of Securities Underlying Derivative Securi (Instr. 3 and 4)		] S	3. Price of Derivative Security Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	Ownersh Form: Direct (D) or Indirec (I) (Instr.	Beneficial Ownership (Instr. 4)	
					Code	v	(A)	(D)	Date Exercisable		opiration	Title	Amo or Num of Shai	ber				
Phantom Stock	(1)	12/31/2007			A		640		(2)		(2)	Common	64	10	\$44.93	8,068	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 director through the Arch Coal, Inc. Deferred Compensation Plan for Non-Employee Directors (the "Plan") and represent past compensation that the director elected to defer under the Plan into a hypothetical investment in shares of Arch Coal, Inc. common stock and/or dividends attributable to such deferred amounts.
- 2. Shares of phantom stock are payable in cash following termination of the director's service as a director of Arch Coal, Inc. The director may transfer amounts held in the phantom stock account into an alternative investment account at any time.

## Remarks:

/s/ Gregory A. Billhartz, Attorney-in-Fact

01/03/2008

\*\* Signature of Reporting Person

Date

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

- $^{\star}$  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.