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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

OMB APPROVAL OMB Number: 3235-0287

Estimated average burden	
hours per response:	0.5

1. Name and Addres	ss of Reporting Person T.	n*	2. Issuer Name and Ticker or Trading Symbol <u>ARCH COAL INC</u> [ACI]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner
(Last) ONE CITY PLA SUITE 300	(First) (Middle) PLACE		3. Date of Earliest Transaction (Month/Day/Year) 08/03/2012	X Officer (give title Other (specify below) below) Sr. V.P. and CFO
(Street) ST. LOUIS (City)	MO (State)	63141 (Zip)	4. If Amendment, Date of Original Filed (Month/Day/Year)	 6. Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person

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 / Disposed Of (5)			5. Amount of Securities Beneficially Owned Following Reported	(D) or Indirect	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	v	Amount	(A) or (D)	Price	Transaction(s) (Instr. 3 and 4)		(1130. 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 I		6. Date Exerc Expiration Da (Month/Day/Y	ate	7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		Derivative Security (Instr. 5) Security	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)	08/03/2012		I		4,949		(2)	(2)	Common Stock	4,949	\$6.72 ⁽¹⁾	9,934	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") and represent past compensation, the vested portion of restricted stock awards and/or payouts under other incentive compensation arrangements that the Executive Officer elected to defer under the Plan into a hypothetical investment in shares of Arch Coal common stock and/or dividends paid with respect to such deferral amounts.

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:



08/06/2012

** Signature of Reporting Person

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.

Date