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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

			2. Issuer Name and Ticker or Trading Symbol ARCH COAL INC [ ACI ]		5. Relationship of Reporting Person(s) to Issuer (Check all applicable) X Director 10% Owner					
(Last) (First) (Middle) ONE CITYPLACE DRIVE		(Middle)	3. Date of Earliest Transaction (Month/Day/Year) 06/30/2011	A	Officer (give title below)	Other (specify below)				
SUITE 300			4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line)						
(Street) ST. LOUIS	МО	63141		X	Form filed by One Repo Form filed by More thar Person	•				
(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)	Date Execution Date,			4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			Securities Beneficially	6. Ownership Form: Direct (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 E		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)	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)	06/30/2011		A		563		(2)	(2)	Common Stock	563	\$26.66	4,940	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:**



07/01/2011

\*\* 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.