

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

OMB APPROVAL	
OMB Number:	3235-0287
Estimated average burden hours per response:	0.5

1. Name and Address of Reporting Person* PEUGH DAVID B			2. Issuer Name and Ticker or Trading Symbol ARCH COAL INC [ACI]			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) Vice President - Bus Dev		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) 02/23/2007			6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person		
ONECITYPLACE DRIVE			4. If Amendment, Date of Original Filed (Month/Day/Year)					
(Street) ST. LOUIS MO 63141								
(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. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	02/23/2007		A		384	A	(1)	24,255	D	
Common Stock	02/26/2007		A		1,151	A	(2)	25,406	D	
Common Stock								2,167	I	By 401(k) Plan

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. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		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
Restricted Stock Units	(3)	02/23/2007		M			384	(4)	(5)	Common Stock	384	(1)	1,920	D	
Restricted Stock Units	(3)	02/26/2007		M			1,151	(6)	(5)	Common Stock	1,151	(2)	2,300	D	
Employee Stock Option (right to buy)	\$32.99	02/22/2007		A			49,100	(7)	02/21/2007	Common Stock	49,100	\$0.00	49,100	D	

Explanation of Responses:

- The reporting person received 2,300 restricted stock units on February 23, 2006. The restricted stock units vest ratably over a three-year period. Upon vesting of 768 restricted stock units on February 23, 2007, the reporting person received 384 shares of common stock and deferred receipt of 384 shares of common stock pursuant to the Arch Coal, Inc. Executive Deferred Compensation Plan.
- The reporting person received 4,600 restricted stock units on February 24, 2005. The restricted stock units vest ratably over a three-year period. Upon vesting of 1,534 restricted stock units on February 26, 2007, the reporting person received 1,151 shares of common stock and deferred receipt of 383 shares of common stock pursuant to the Arch Coal, Inc. Executive Deferred Compensation Plan.
- Each restricted stock unit represents a right to receive one share of common stock unless otherwise deferred, at the reporting person's election, pursuant to the Arch Coal, Inc. Executive Deferred Compensation Plan.
- The reporting person received 2,300 restricted stock units on February 23, 2006. The restricted stock units vest ratably over a three-year period. On February 23, 2007, 768 restricted stock units vested.
- The restricted stock units do not expire.
- The reporting person received 4,600 restricted stock units on February 24, 2005. The restricted stock units vest ratably over a three-year period. On February 26, 2007, 1,534 restricted stock units vested.
- The option vests in three equal annual installments beginning on February 22, 2008.

Remarks:

/s/ Gregory A. Billhartz, 02/27/2007
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.