

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* <u>EAVES JOHN W</u> (Last) (First) (Middle) <u>ONE CITYPLACE DRIVE</u> (Street) <u>ST. LOUIS MO 63141</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>ARCH COAL INC [ACI]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) President & COO
	3. Date of Earliest Transaction (Month/Day/Year) <u>05/15/2007</u>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	

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 ⁽¹⁾	05/15/2007		M		26,500	A	\$13.94	63,819	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.27	63,719	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.28	63,619	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.29	63,519	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.32	63,419	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.33	63,319	D	
Common Stock ⁽¹⁾	05/15/2007		S		300	D	\$38.34	63,019	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.36	62,919	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.37	62,819	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.38	62,719	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.41	62,619	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.45	62,519	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.46	62,419	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.47	62,319	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.51	62,219	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.52	62,119	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.56	62,019	D	
Common Stock ⁽¹⁾	05/15/2007		S		100	D	\$38.57	61,919	D	
Common Stock ⁽¹⁾	05/15/2007		S		200	D	\$38.59	61,719	D	
Common Stock ⁽¹⁾	05/15/2007		S		400	D	\$38.61	61,319	D	
Common Stock ⁽¹⁾	05/15/2007		S		900	D	\$38.63	60,419	D	
Common Stock ⁽¹⁾	05/15/2007		S		200	D	\$38.64	60,219	D	
Common Stock ⁽¹⁾	05/15/2007		S		1,100	D	\$38.65	59,119	D	
Common Stock ⁽¹⁾	05/15/2007		S		300	D	\$38.66	58,819	D	
Common Stock ⁽¹⁾	05/15/2007		S		400	D	\$38.67	58,419	D	
Common Stock ⁽¹⁾	05/15/2007		S		1,000	D	\$38.68	57,419	D	
Common Stock ⁽¹⁾	05/15/2007		S		300	D	\$38.69	57,119	D	
Common Stock ⁽¹⁾	05/15/2007		S		400	D	\$38.7	56,719	D	
Common Stock ⁽¹⁾	05/15/2007		S		800	D	\$38.71	55,919	D	
Common Stock ⁽¹⁾	05/15/2007		S		1,000	D	\$38.72	54,919	D	

**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	Amount or Number of Shares				
Employee Stock Options (right to buy)	\$13.94	05/15/2007		M			26,500	(2)	07/23/2007	Common Stock	26,500	\$0.00	0	D	

Explanation of Responses:

- The exercise of employee stock options and sale of underlying shares of common stock by the executive officer reported on this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the executive officer on December 21, 2006.
- The reporting person received 26,500 stock options on July 23, 1997. The stock options vested ratably over a three year period as follows: 8,834 stock options vested on July 23, 1998; 8,833 stock options vested on July 23, 1999 and 8,833 stock options vested on July 23, 2000.

Remarks:

1 of 3

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

05/17/2007

** 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.

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