

OMB APPROVAL	
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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

1. Name and Address of Reporting Person* LEER STEVEN F (Last) (First) (Middle) ONECITYPLACE DRIVE (Street) ST. LOUIS MO 63141 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol ARCH COAL INC [ACI]	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) <p style="text-align: center;">Chairman and CEO</p>
	3. Date of Earliest Transaction (Month/Day/Year) 02/23/2012	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> 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. 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	02/23/2012		M ⁽¹⁾		218,900	A	\$9.08	241,320	D	
Common Stock	02/23/2012		S ⁽¹⁾		145,933	D	\$13.83	95,387	D	
Common Stock	02/23/2012		S ⁽¹⁾		72,967	D	\$13.84	22,420	D	
Common Stock								63,797	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	Amount or Number of Shares				
Employee Stock Options	\$13.93	02/23/2012		A		206,700		(2)	02/23/2022	Common Stock	206,700	\$0.00	206,700	D	
Restricted Stock Units	\$13.93	02/23/2012		A		81,850		(3)	(4)	Common Stock	81,850	\$0.00	81,850	D	
Employee Stock Options	\$9.08	02/23/2012		M ⁽¹⁾		218,900		(5)	02/29/2012	Common Stock	218,900	\$0.00	0	D	

Explanation of Responses:

- The transactions were made pursuant to a Rule 10b5-1 trading plan adopted by the reporting person.
- The options vest ratably over 3 years as follows: 68,900 shares vest on February 23, 2013; 68,900 shares vest on February 23, 2014; and 68,900 shares vest on February 23, 2015.
- On February 23, 2012, the reporting person received 81,850 restricted stock units. All of these restricted stock units vest on February 23, 2015.
- The restricted stock units do not expire.
- The reporting person received 218,900 stock options on February 28, 2002. The stock options vested as follows: 54,725 stock options vested on February 28, 2003; 54,725 stock options vested on February 29, 2004; 54,724 stock options vested on February 28, 2005; and 54,726 stock options vested on February 28, 2006.

Remarks:

/s/ Jon S. Ploetz, Attorney-in-Fact 02/27/2012

** 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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