

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL	
OMB Number:	3235-0104
Estimated average burden hours per response:	0.5

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* <u>Cochran Kenneth D.</u> (Last) (First) (Middle) ONE CITYPLACE DRIVE SUITE 300 (Street) ST. LOUIS MO 63141 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 08/09/2012	3. Issuer Name and Ticker or Trading Symbol <u>ARCH COAL INC [ACI]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) Sr. VP - Operations	5. 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 Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	17,500	D	

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date				
Employee Stock Options	(1)	02/22/2017	Common Stock 7,500	32.99	D	
Employee Stock Options	(2)	02/21/2018	Common Stock 7,850	52.69	D	
Employee Stock Options	(3)	02/19/2019	Common Stock 10,050	14.05	D	
Employee Stock Options	(4)	02/18/2020	Common Stock 7,600	22.65	D	
Employee Stock Options	(5)	02/24/2021	Common Stock 5,200	32.49	D	
Employee Stock Options	(6)	02/23/2022	Common Stock 21,650	13.93	D	
Restricted Stock Units	(7)	(8)	Common Stock 8,600	13.93	D	

Explanation of Responses:

- The reporting person received 7,500 stock options on February 22, 2007. The stock options vested ratably over 3 years as follows: 2,500 shares vested on February 22, 2008; 2,500 shares vested on February 22, 2009; and 2,500 shares vested on February 22, 2010.
- The reporting person received 7,850 stock options on February 21, 2008. The stock options vested ratably over 3 years as follows: 2,617 shares vested on February 21, 2009; 2,617 shares vested on February 21, 2010; and 2,616 shares vested on February 21, 2011.
- The reporting person received 10,050 stock options on February 19, 2009. The stock options vest ratably over 4 years as follows: 2,513 shares vested on February 19, 2010; 2,513 shares vested on February 19, 2011; 2,512 shares vested on February 19, 2012; and 2,512 shares will vest on February 19, 2013.
- The reporting person received 7,600 stock options on February 18, 2010. The stock options vest ratably over 4 years as follows: 1,900 shares vested on February 18, 2011; 1,900 shares vested on February 18, 2012; 1,900 shares will vest on February 18, 2013; and 1,900 shares will vest on February 18, 2014.
- The reporting person received 5,200 stock options on February 24, 2011. The stock options vest ratably over 3 years as follows: 1,734 shares vested on February 24, 2012; 1,733 shares will vest on February 24, 2013; and 1,733 shares will vest on February 24, 2014.
- The reporting person received 21,650 stock options on February 23, 2012. The stock options vest ratably over 3 years as follows: 7,217 shares will vest on February 23, 2013; 7,217 shares will vest on February 23, 2014; and 7,216 shares will vest on February 24, 2015.
- The reporting person received 8,600 restricted stock units on February 23, 2012. The restricted stock units vest on February 23, 2015.
- The restricted stock units do not expire.

Remarks:

/s/ Jon S. Ploetz, Attorney-in-Fact 08/13/2012

** 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 5 (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.

POWER OF ATTORNEY

The undersigned, appoints the following individuals, with full power to each of them to act alone, as his true and lawful attorneys-in-fact and agents to execute and file on behalf of the undersigned all Forms 3, 4 and 5, and any amendments thereto, that the undersigned may be required to file with the Securities and Exchange Commission, and any stock exchange or similar authority, as a result of the undersigned's ownership of or transactions in securities of Arch Coal, Inc. The authority of the following individuals under this Power of Attorney shall continue until the undersigned is no longer required to file Forms 3, 4 and 5 with regard to the undersigned's ownership of or transactions in securities of Arch Coal, Inc., unless earlier revoked in writing. The undersigned acknowledges that the following individuals are not assuming any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934.

The following Officers of Arch Coal, Inc.:

Secretary of the Corporation

Assistant Secretary of the Corporation

General Counsel of the Corporation

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 9th day of August, 2012.

/s/ Kenneth D. Cochran

Kenneth D. Cochran