

## INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL

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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934  
or Section 30(h) of the Investment Company Act of 1940

<b>1. Name and Address of Reporting Person*</b> <u>Ziegler John A.</u>  (Last) (First) (Middle) ONE CITYPLACE DRIVE SUITE 300  (Street) ST. LOUIS MO 63141  (City) (State) (Zip)	<b>2. Date of Event Requiring Statement (Month/Day/Year)</b> 04/01/2012	<b>3. Issuer Name and Ticker or Trading Symbol</b> ARCH COAL INC [ ACI ]  <b>4. Relationship of Reporting Person(s) to Issuer (Check all applicable)</b> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) Vice President - HR	<b>5. If Amendment, Date of Original Filed (Month/Day/Year)</b>  <b>6. Individual or Joint/Group Filing (Check Applicable Line)</b> <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person
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### 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	850	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				
Phantom Stock	(1)	(1)	Common Stock	399	(2)	D
Restricted Stock Units	(3)	(4)	Common Stock	3,400	13.93	D
Employee Stock Options	(5)	02/23/2022	Common Stock	8,550	13.93	D
Employee Stock Options	(6)	12/02/2012	Common Stock	3,024	10.26	D
Employee Stock Options	(7)	02/22/2017	Common Stock	5,350	32.99	D
Employee Stock Options	(8)	04/26/2017	Common Stock	4,100	37.72	D
Employee Stock Options	(9)	02/21/2018	Common Stock	5,350	52.69	D
Employee Stock Options	(10)	02/19/2019	Common Stock	8,700	14.05	D
Employee Stock Options	(11)	02/18/2020	Common Stock	6,550	22.65	D
Employee Stock Options	(12)	02/24/2021	Common Stock	5,400	32.49	D

**Explanation of Responses:**

1. Shares of phantom stock are payable in cash on the date or dates elected by the Executive Officer, subject to the terms of the Arch Coal, Inc. Deferred Compensation Plan (the "Plan"). The Executive Officer may transfer any and all of the phantom stock account into an alternative investment account at any time.
2. 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 Executive Officer through the Plan. The shares of phantom stock acquired by the Executive Officer represent past compensation that the Executive Officer elected to defer under the Plan into a hypothetical investment in shares of Arch Coal, Inc. common stock.
3. The reporting person received 3,400 restricted stock units on February 23, 2012. The restricted stock units vest on February 23, 2015.
4. The restricted stock units do not expire.
5. The reporting person received 8,550 stock options on February 23, 2012. The options vest ratably over 3 years as follows: 2,850 shares will vest on February 23, 2013; 2,850 shares will vest on February 23, 2014; and 2,850 shares will vest on February 23, 2015.
6. The reporting person received 12,100 stock options on December 2, 2002. The options vested ratably over 4 years as follows: 3,025 shares vested on December 2, 2003; 3,025 shares vested on December 2, 2004; 3,025 shares vested on December 2, 2005; and 3,025 shares vested on December 2, 2006.
7. The reporting person received 5,350 stock options on February 22, 2007; The stock options vested ratably over a period of 3 years as follows: 1,784 shares vested on February 22, 2008; 1,783 shares vested on February 22, 2009; and 1,783 shares vested on February 22, 2010.
8. The reporting person received 4,100 stock options on April 26, 2007. The stock options vested ratably over 3 years as follows: 1,367 shares vested on April 26, 2008; 1,367 shares vested on April 26, 2009; and 1,366 shares vested on April 26, 2010.
9. The reporting person received 5,350 stock options on February 21, 2008. The stock options vested ratably over 3 years as follows: 1,784 shares vested on February 21, 2009; 1,783 shares vested on February 21, 2010; and 1,783 shares vested on February 21, 2011.
10. The reporting person received 8,700 stock options on February 19, 2009. The options vest ratably over 4 years as follows: 2,175 shares vested on February 19, 2010; 2,175 shares vested on February 19, 2011; 2,175 shares vested on February 19, 2012; and 2,175 shares will vest on February 19, 2013.
11. The reporting person received 6,550 stock options on February 18, 2010. The options vest ratably over 4 years as follows: 1,638 shares vested on February 18, 2011; 1,637 shares vested on February 18, 2012; 1,638 shares will vest on February 18, 2013; and 1,637 shares will vest on February 18, 2014.
12. The reporting person received 5,400 stock options on February 24, 2011. The stock options vest ratably over 3 years as follows: 1,800 shares vested on February 24, 2012; 1,800 shares will vest on February 24, 2013; and 1,800 shares will vest on February 24, 2014.

**Remarks:**

/s/ Jon S. Ploetz, Attorney-in-  
Fact 04/06/2012

\*\* 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 1st day of April, 2012.

/s/ John A. Ziegler

John A. Ziegler