Freudenthal David D. Form 4

#### April 01, 2011 **OMB APPROVAL FORM OMB** 3235-0287 UNITED STATES SECURITIES AND EXCHANGE Number: **COMMISSION** January 31, Expires: 2005 Washington, D.C. 20549 Estimated average Check this burden hours per box if no STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP response... 0.5 longer subject **OF SECURITIES** to Section 16. Form 4 or Form 5 Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, obligations Section 17(a) of the Public Utility Holding Company Act of 1935 or may continue. Section 30(h) of the Investment Company Act of 1940 See Instruction 1(b). (Print or Type Responses) 1. Name and Address of Reporting Person 5. Relationship of Reporting Person(s) to 2. Issuer Name and Ticker or Trading Issuer Symbol

Freudenthal David D.				ARCH COAL INC [ACI]			(Check all applicable)			
(Last) (First) (Middle)  ONE CITYPLACE DRIVE, SUITE 300			(	3. Date of Earliest Transaction (Month/Day/Year) 03/31/2011			_X_ Director Officer (given title below)	100	% Owner her (specify	
(Street)				4. If Amendment, Date Original Filed(Month/Day/Year)			6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting			
	ST. LOU (City)	(State)	(Zip)	Table I - Non	Dei	rivative Securities Acc	Person			
	1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemec Execution D any (Month/Day	d 3. Date, if Trans Code //Year) (Instr.	actio	4. Securities onAcquired (A) or Disposed of (D) (Instr. 3, 4 and 5)  (A) or Amount (D) Price	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 (D) Price

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

> Persons who respond to SEC 1474 the collection of (9-02)information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

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

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1. Title of	2.	3. Transaction Date	3A. Deemed	4.	5. Number	6. Date Exer	cisable and	7. Title and A	Amount of	
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	Transact	io <b>xo</b> f	Expiration D	Expiration Date		Underlying Securities	
Security	or Exercise		any	Code	Derivative	(Month/Day/Year)		(Instr. 3 and 4)		
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8)	Securities					
	Derivative				Acquired					
	Security				(A) or					
					Disposed					
					of (D)					
					(Instr. 3,					
					4, and 5)					
				Code V	(A) (D	Date	Expiration	Title	Amount	
						Exercisable	Date		or	
									Number	
									of	
									Shares	
Phantom	(1)	03/31/2011		A	416	(2)	(2)	Common	416	
Stock	<u>11</u>	03/31/2011		А	410	<u> </u>	<u>(-)</u>	Stock	410	

# **Reporting Owners**

Reporting Owner Name / Address	Relationships				
<b>r</b>	Director	10% Owner	Officer	Other	
Freudenthal David D. ONE CITYPLACE DRIVE SUITE 300 ST. LOUIS, MO 63141	X				

## **Signatures**

/s/ Jon S. Ploetz, Attorney-in-Fact 04/01/2011

\*\*Signature of Reporting Person Date

## **Explanation of Responses:**

- \* 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).
- 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 director through the Arch Coal, Inc. Deferred Compensation Plan for Non-Employee Directors (the "Plan") and represent past compensation that the director elected to defer under the Plan into a hypothetical investment in shares of Arch Coal, Inc. common stock and/or dividends attributable to such deferred amounts.
- (2) Shares of phantom stock are payable in cash following termination of the director's service as a director of Arch Coal, Inc. The director may transfer amounts held in the phantom stock account into an alternative investment account at any time.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.