FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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| | OMB APPROVAL | | | | | | | | | |
|---|---------------------|-----------|--|--|--|--|--|--|--|--|
| l | OMB Number: | 3235-0287 | | | | | | | | |
| l | Estimated average b | ourden | | | | | | | | |

0.5

hours per response:

| | Check this box if no longer subject to |
|---|--|
| ١ | Section 16. Form 4 or Form 5 |
| J | obligations may continue. See |
| | Instruction 1(h) |

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>JENNINGS BRIAN J</u> | | | | | | 2. Issuer Name and Ticker or Trading Symbol ARCH COAL INC [ACI] | | | | | | | | | ationship k all appli Directo | cable) ` | eporting Person(s) to Issuer e) 10% Owner | | |
|--|---|--|--|--------|---|--|---------|------|---|-------------------|---|--|-----------------------------------|----------------------|---|--|---|--|--|
| (Last) (First) (Middle) ONE CITYPLACE DRIVE | | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 03/30/2012 | | | | | | | | | Officer below) | (give title | | Other (s below) | specify |
| (Street) ST. LOU (City) | | | 53141 (Zip) | | 4. If | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | 6. Ind Line) X | | | | | |
| | | Tab | le I - Nor | -Deriv | ative | Sec | curitie | s Ac | quired, I | Dis | osed o | of, or Be | nefic | ially | Owned | <u> </u> | | | |
| 1. Title of Security (Instr. 3) 2. Transac Date (Month/Date) | | | | | | Execution Date, | | | Transaction Code (Instr. 5) Transaction Disposed Of (D) 5) | | ties Acquired (A) or d Of (D) (Instr. 3, 4 a | | | Reporte | s Form ally (D) o ollowing (I) (II | | n: Direct r Indirect istr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | |
| | | | | | | | | Code | V | Amount (A) or (D) | | r Prid | e | Transac (Instr. 3 | | | | | |
| | | Т | | | | | | | uired, Di s, option | | | | | | Owned | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deeme Execution if any (Month/Day | Date, | I. Fransaction Code (Instr. 3) | | ı of | | 6. Date Exercisable Expiration Date (Month/Day/Year) | | | and 7. Title and Amount of Securities Underlying Derivative Secu (Instr. 3 and 4) | | S (i | 3. Price of Derivative Security (Instr. 5) | 9. Number derivative Securities Beneficiall Owned Following Reported Transactio (Instr. 4) | ly | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
| | | | | | Code | v | (A) | (D) | Date Exercisable | | xpiration ate | Title | Amou or Numb of Share | er | | | | | |
| Phantom Stock | (1) | 03/30/2012 | | | A | | 4,085 | | (2) | | (2) | Common Stock | 4,08 | 5 | \$10.71 | 39,781 | | D | |

Explanation of Responses:

- 1. 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.

Remarks:

/s/ Jon S. Ploetz, Attorney-in-

Fact

** Signature of Reporting Person

Date

04/03/2012

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.

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.