FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPROVAL | | | | | | | | | |
|---------------------|-----------|--|--|--|--|--|--|--|--|
| OMB Number: | 3235-0287 | | | | | | | | |
| Estimated average h | urden | | | | | | | | |

0.5

hours per response:

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* LORSON JOHN W | | | | | | 2. Issuer Name and Ticker or Trading Symbol ARCH COAL INC [ACI] | | | | | | | | | | all app | olicable) etor | 10% Owner Other (specibelow) Acctg Officer | | Owner | |
|---|--|--|---|---------|---------------------------|---|--|------|---|--------|--------------------|---|-------|-------------------------|--|-----------------------|--|--|---|---------------------------------------|--|
| (Last) (First) (Middle) ONE CITYPLACE DRIVE | | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 02/24/2014 | | | | | | | | | | belov | , | | | ` ' | |
| (Street) ST. LOU (City) | | | 53141 Zip) | | 4. If | Line) X F | | | | | | | | | | Form | or Joint/Group Filing (Check Applicable rm filed by One Reporting Person rm filed by More than One Reporting rson | | | | |
| | | Tabl | e I - Nor | n-Deriv | ative | Se | curitie | s Ac | quired, | Dis | posed o | f, or | Ben | efici | ally C | wne | ed | | | | |
| 1. Title of Security (Instr. 3) 2. Trans Date (Month// | | | | | Execu Pay/Year) if any | | A. Deemed execution Date, any Month/Day/Year) | | 3. Transaction Code (Instr. 8) | | | | | 4 and Sec Ben Owr | | cially I Following | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | | 7. Nature of Indirect Beneficial Ownership | | |
| | | | | | | | | Code | v | Amount | (| A) or D) | Price | , lı | Reported Transaction(s) (Instr. 3 and 4) | | | | (Instr. 4) | | |
| Common Stock 02/2 | | | | | | /2014 | | S | | 600 | | D | \$4. | 09 | 0 | | | D | | | |
| Common Stock | | | | | | | | | | | | | | 722 | | | I | By 401(k) | | | |
| | 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 Da if any (Month/Day/\) | Date, | Code (Inst | | | | 6. Date E Expiratio (Month/D | n Date | 9 | 7. Title and Amount of Securities Underlying Derivative Security (Instr. and 4) | | str. 3 | | | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4) | Ownersh Form: Direct (D or Indirec (I) (Instr. | vnership orm: rect (D) Indirect | Beneficial Ownership (Instr. 4) | |
| | | | | | Code | v | (A) | (D) | Date Exercisa | | Expiration Date | Title | or | ount nber ires | | | | | | | |

Explanation of Responses:

Remarks:

/s/ Jon S. Ploetz, Attorney-in-02/26/2014

Fact

** Signature of Reporting Person

Date

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

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.

^{*} 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).