

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>Lang Paul A</u> <hr/> (Last) (First) (Middle) <u>ONE CITY PLACE DRIVE</u> <u>SUITE 300</u> <hr/> (Street) <u>ST. LOUIS MO 63141</u> <hr/> (City) (State) (Zip) | 2. Date of Event Requiring Statement (Month/Day/Year) 12/07/2006 | 3. Issuer Name and Ticker or Trading Symbol <u>ARCH COAL INC [ACI]</u> <hr/> 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) <p style="text-align: center;"><u>Senior VP - Operations</u></p> | 5. If Amendment, Date of Original Filed (Month/Day/Year) <hr/> 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) |
|---------------------------------|---|--|---|
| <u>Common Stock</u> | 20,000 | 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 | Title | Amount or Number of Shares | | | |
| <u>Restricted Stock Units</u> | (1) | (2) | <u>Common Stock</u> | 2,500 | (3) | D | |
| <u>Employee Stock Options (Right to Buy)</u> | 04/25/2006 | 04/25/2012 | <u>Common Stock</u> | 6,000 | 11.3 | D | |

Explanation of Responses:

1. The restricted stock units were granted on February 23, 2006 and vest ratably over a three-year period.
2. The restricted stock units do not expire.
3. Each restricted stock unit represents a right to receive one share of common stock unless otherwise deferred, at the reporting person's election, pursuant to the Arch Coal, Inc. Executive Deferred Compensation Plan.

Remarks:

/s/ Gregory A. Billhartz,
Attorney-in-Fact

12/12/2006

** 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 7th day of December, 2006.

/s/ Paul A. Lang
Paul A. Lang