

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of report (Date of earliest event reported): **April 23, 2012 (April 18, 2012)**

Arch Coal, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation)

1-13105
(Commission File Number)

43-0921172
(I.R.S. Employer Identification No.)

CityPlace One
One CityPlace Drive, Suite 300
St. Louis, Missouri 63141
(Address, including zip code, of principal executive offices)

Registrant's telephone number, including area code: **(314) 994-2700**

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.04 Mine Safety — Reporting of Shutdowns and Patterns of Violation

On April 18, 2012, Lone Mountain Processing, Inc., a subsidiary of Arch Coal, Inc., received an imminent danger order under section 107(a) of the Mine Act alleging that a truck had at some point backed onto a berm immediately uphill of a slurry impoundment pool at the Lone Mountain mine complex in Lee County, Virginia. Mine personnel immediately took corrective action and the order was promptly terminated.

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Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: April 23, 2012

Arch Coal, Inc.

By: /s/ Robert G. Jones
Robert G. Jones
Senior Vice President – Law, General Counsel and
Secretary

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