
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 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):

September 21, 2006

Arch Coal, Inc.

(Exact name of registrant as specified in its charter)

Delaware

1-13105

43-0921172

(State or other jurisdiction
of incorporation)

(Commission
File Number)

(I.R.S. Employer
Identification No.)

One CityPlace Drive, Suite 300, St. Louis, Missouri

63141

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code:

(314) 994-2725

Not Applicable

Former name or former address, if changed since last report

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))
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Item 7.01 Regulation FD Disclosure.

On September 21, 2006, Arch Coal, Inc. announced that its board of directors has approved a share repurchase program pursuant to which the company may acquire up to 14 million shares of its common stock.

A copy of the press release announcing the share repurchase program is attached hereto as Exhibit 99.1 and is hereby incorporated by reference.

Item 9.01 Financial Statements and Exhibits.

Exhibit 99.1 Press release dated September 21, 2006.

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.

Arch Coal, Inc.

September 21, 2006

By: */s/ Robert J. Messey*

Name: Robert J. Messey

Title: Senior Vice President and Chief Financial Officer

Exhibit Index

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release dated September 21, 2006

News from Arch Coal, Inc.

FOR FURTHER INFORMATION:

Deck S. Slone
Vice President, Investor
Relations and Public Affairs
314/994-2717

FOR IMMEDIATE RELEASE
September 21, 2006

Arch Coal, Inc. Announces New Share Repurchase Program

ST. LOUIS, (September 21, 2006) – Arch Coal, Inc. (NYSE:ACI) announced today that its Board of Directors has authorized the company to repurchase up to 14,000,000 shares of its common stock, effective immediately. The timing of any purchases, and the ultimate number of shares to be purchased, will depend on market conditions. The shares will be acquired in the open market or through private transactions in accordance with Securities and Exchange Commission requirements. The company had 143,544,602 common shares outstanding as of September 15, 2006.

“The long-term outlook for the U.S. coal sector continues to strengthen, and we believe that Arch’s extensive reserve base, highly productive operations and skilled workforce position the company for future success,” said Steven F. Leer, Arch’s chairman and chief executive officer. “As a result, Arch’s board and management consider the company’s stock to be an attractive investment option, and we view share repurchase as an effective way to create value for shareholders.”

Arch Coal is the nation’s second largest coal producer. The company’s core business is providing U.S. power generators with clean-burning, low-sulfur coal for electric generation. Through its national network of mines, Arch supplies the fuel for approximately 6% of the electricity generated in the United States.

Forward-Looking Statements: This press release contains “forward-looking statements” – that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance, and often contain words such as “expects,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” or “will.” Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For us, particular uncertainties arise from changes in the demand for our coal by the domestic electric generation industry; from legislation and regulations relating to the Clean Air Act and other environmental initiatives; from operational, geological, permit, labor and weather-related factors; from fluctuations in the amount of cash we generate from operations; from future integration of acquired businesses; and from numerous other matters of national, regional and global scale, including those of a political, economic, business, competitive or regulatory nature. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. For a description of some of the risks and uncertainties that may affect our future results, you should see the risk factors described from time to time in the reports we file with the Securities and Exchange Commission.

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