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): September 9, 2010 (September 9, 2010)

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:

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure.

On September 9, 2010, Arch Coal, Inc. issued a press release announcing that its Dugout Canyon Mine is resuming its longwall production. A copy of the press release is attached hereto as Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibit is attached hereto and filed herewith.

Exhibit	
	Description
	Press release dated September 9, 2010.

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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: September 9, 2010

Arch Coal, Inc.

By: <u>/s/ Robert G. Jones</u> Robert G. Jones Senior Vice President — Law, General Counsel and Secretary

Exhibit Index

Exhibit	
No.	
99.1	

Description Press release dated September 9, 2010.



For Further Information: Media — Kim Link 314-994-2936

FOR IMMEDIATE RELEASE

Dugout Canyon Mine Resumes Longwall Production

Wellington, Utah (September 9, 2010) — Arch Coal's Canyon Fuel Company subsidiary today announced that its Dugout Canyon mine in Carbon County, Utah, has restarted its longwall mining system and is in the process of resuming production.

After production was interrupted on June 22, the company worked closely and cooperatively with the Mine Safety and Health Administration (MSHA) to assess the situation and restart the mine. "We want to extend our great appreciation to the MSHA team for its diligence and hard work during the outage," said Gene DiClaudio, president of Arch Western Bituminous Group.

More than 100 of Dugout Canyon's 275 employees are returning from other company operations in Utah and Colorado where they had been working on temporary assignment. "We were pleased so many Dugout employees offered to work at other locations while the mine was idle," said DiClaudio.

Dugout Canyon mine produces approximately 2 percent of Arch's total annual output. Arch's Canyon Fuel Company is the largest coal producer in Utah and operates the Sufco, Skyline and Dugout Canyon mines with a total workforce of approximately 800.

St. Louis-based Arch Coal, Inc. (NYSE:ACI) is the second largest U.S. coal producer. Through its national network of mines, Arch supplies cleanerburning, low-sulfur coal to fuel roughly 8 percent of the nation's electricity. The company also ships coal to domestic and international steel manufacturers as well as international power producers.

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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.