



DIVISION OF  
CORPORATION FINANCE  
Mail Stop 7010

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

July 31, 2008

Via U.S. mail and facsimile

Mr. Steven F. Leer  
Chairman and Chief Executive Officer  
Arch Coal, Inc.  
One CityPlace Drive, Ste. 300  
St. Louis, Missouri 63141

**Re: Arch Coal, Inc.  
Form 10-K  
Filed February 29, 2008  
File No. 1-13105**

Dear Mr. Leer:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filings. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K filed February 29, 2008

General

1. We note in various places throughout your Form 10-K that mention is made to the Magnum Coal asset sale in 2005. In light of its continued relevance, in all future filings, so long as its impact continues to be material, please include a summary of the Magnum Coal transaction in an appropriate place in your reports. We note the disclosure in footnote number 2 of your financial statements.

Coal Mining Methods, page 7

2. Please tell us whether or not you perform retreat mining. Further, please represent to us that in future filings you will indicate whether or not you perform retreat mining.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 37

3. We note your disclosure in various places in your MD&A which compares and contrasts various reporting periods and references such periods as reflecting "weaker market conditions" (see for example pages 39 and 43). In all future filings, revise such disclosure to ensure that it is internally consistent with respect to your characterization of results.

Closing Comments

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendments and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United

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States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Please contact John Madison at (202) 551-3296 or Michael Karney at (202) 551-3847 with any questions regarding our comments.

Sincerely,

H. Roger Schwall  
Assistant Director

Cc: J. Madison  
M. Karney