



DIVISION OF
CORPORATION FINANCE
MAIL STOP 7010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

April 30, 2008

Mr. Gregory H. Boyce
Chairman and Chief Executive Officer
Peabody Energy Corporation
701 Market Street
St. Louis, MO 63101

**Re: Peabody Energy Corporation
Form 10-K for the Fiscal Year Ended December 31, 2007
Filed February 28, 2008
File No. 1-16463**

Dear Mr. Boyce:

We have reviewed your Form 10-K for the Fiscal Year Ended December 31, 2007 and have the following comments. Please provide a written response to our comments. 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 filing. 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 for the Fiscal Year Ended December 31, 2007

Business

El Segundo Mine, page 6

1. Please provide further detail on the coal supply agreement signed for the El Segundo Mine. We note your disclosure on page 10 that this contract is expected to generate revenue in excess of \$1 billion. Tell us how much revenue has been generated to date and provide us with analysis as to whether you are required to file this agreement. Further, please provide us with a similar analysis for your

other long-term coal supply agreements, such as the agreement signed in December 2006 with the Tennessee Valley Authority.

Risk Factors

“We may not be able to achieve some or all of the strategic objectives that we expected to achieve in connection with the spin-off of Patriot Coal,” page 27

2. Please expand this risk factor to provide sufficient disclosure the risk discussed. Explain the strategic objectives you expected to achieve and the effect on your business or results of operations if you do not achieve these objectives.

Consolidated Statements of Cash Flows, page F-4

3. Within cash flows from investing activities you present a line item titled ‘Federal Coal Lease Expenditures’. Please tell us what types of costs are included within this item, and why classification within investing activities is appropriate. Please also confirm to us that the amount recorded for the year ended December 31, 2007 is the same amount as that for the year ended December 31, 2006.

Notes to Consolidated Financial Statements

Note 1 Summary of Significant Accounting Policies

Property, Plant, Equipment and Mine Development Cost, page F-9

4. At the top of page ten, you disclose that mine development costs are amortized over the estimated lives of the mines using the straight-line method. Please tell us the specific costs that are identified as mine development cost, and tell us why you believe amortizing these costs over the life of the mine using the straight-line method is most appropriate.

Definitive Proxy filed March 27, 2008

Peabody Relative Performance for Performance Period Ending December 31, 2007..., page 49

5. Please elaborate on the four mining companies used for comparison purposes in this section. Further, please explain how this differs from and why you are using these four mining companies as compared to the companies included in the mining comparator group on page 22.

Closing Comments

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your 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 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.

Mr. Gregory H. Boyce
Peabody Energy Corporation
April 30, 2008
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You may contact Mark Wojciechowski at (202) 551-3759, or in his absence, Jennifer O'Brien at (202) 551-3721 if you have questions regarding comments on the financial statements and related matters. Please contact John Madison at (202) 551-3296 or in his absence, Anne Nguyen Parker at (202) 551-3611 with any other questions.

Sincerely,

H. Roger Schwall
Assistant Director