



DIVISION OF
CORPORATION FINANCE
MAIL STOP 7010

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

June 12, 2007

By Facsimile and U.S. Mail

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

Re: Peabody Energy Corporation
Form 10-K for the Fiscal Year Ended December 31, 2006
Filed February 28, 2007
Response Letter Dated May 17, 2007
File No. 001-16463

Dear Mr. Boyce:

We reviewed your responses to our prior comments on the above referenced filing as set forth in your letter dated May 17, 2007 and have the following additional 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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Form 10-K For the Year Ended December 31, 2006

Note 1 Summary of Significant Accounting Policies, page F-6

Inventory, page F-8

1. We note your response to our prior comment number three of our letter dated May 3, 2007 that indicates advance stripping costs related to post-production are "primarily" expensed as incurred. Please clarify your response to explain instances where you don't expense such costs as incurred. Please refer to the guidance of paragraph 6 of EITF 04-6.

2. We note your response to our prior comments numbers four and five of our letter dated May 3, 2007. Please explain why you believe it is appropriate to capitalize initial box cuts or overburden removal associated with new pits within an existing mine that is in the production stage. Please note that the guidance of paragraph 6 of EITF 04-6 states that stripping costs incurred during the production phase of a “mine” are variable production costs.

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

3. We note your response to prior comment six of our letter dated May 3, 2007. Included in the book value of coal reserves are mineral rights for leased coal interests including advance royalties and the net book value of these mineral rights was \$3.5 billion at December 31, 2006. Please clarify which costs comprise the remaining net book value of coal reserves.
4. Please modify your accounting policy that is included as part of your audited financial statements to address that your reserve estimates include reductions for recoverability factors.
5. We note your response to our prior comment numbers seven and eight of our letter dated May 3, 2007. Please clarify your accounting policy associated with drilling and study costs incurred to convert or upgrade mineral resources, including measured, indicated and inferred resources to reserves. Please note, that we believe all drilling and study costs associated with in-fill, step-out, condemnation, geotechnical and confirmation drilling should be expensed as incurred. Please contact us to discuss.

Note 4 Business Combinations, page F-16

6. We note your response to our prior comment number nine that indicates resulting goodwill will be allocated to your Australian operating segment. We re-issue that portion of our prior comment that requested you to address the goodwill allocation to your reporting units and whether you consider an individual operating mine to constitute a reporting unit. Please refer to paragraph 30 of SFAS 142 and EITF 04-4.

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.

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You may contact John Cannarella at (202) 551-3337 or Kevin Stertzel at (202) 551-3723 if you have questions regarding comments on the financial statements and related matters. You may contact Ken Schuler, Mining Engineer, at (202) 551-3718 with questions about engineering comments. Please contact me at (202) 551-3683 with any other questions.

Sincerely,

Jill Davis
Branch Chief