



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 3561

January 5, 2018

Via E-mail

Mr. John T. Drexler  
Senior Vice President and Chief Financial Officer  
Arch Coal, Inc.  
One CityPlace Drive, Ste. 300  
St. Louis, Missouri 63141

**Re: Arch Coal, Inc.  
Form 10-K for the Year Ended December 31, 2016  
Form 8-K Filed October 31, 2017  
Response dated December 21, 2017  
File No. 1-13105**

Dear Mr. Drexler:

We have reviewed your December 21, 2017 response to our comment letter and have the following comments. In our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our December 11, 2017 letter.

Form 10-K for the Year Ended December 31, 2016

Items 1. Business

Our Mining Operations page 13

1. We note your response to comment 1. Please tell us if any of the materials disclosed in your unassigned reserve table on page 45 are uneconomical to mine based on current market conditions and, if so, explain the basis for designating these materials as reserves.

Mr. John T. Drexler  
Arch Coal, Inc.  
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Form 8-K Filed October 31, 2017  
Item 2.02 Results of Operations and Financial Condition  
Company Outlook, page 6

2. We note your response to comment 3 and proposed disclosures. Please revise your disclosures to also provide reconciling information that is available without an unreasonable effort. Furthermore, identify in your disclosures the specific information that is unavailable without unreasonable effort and disclose its probable significance. Refer to Item 10(e)(1)(i)(B) of Regulation S-K and Section II.B.2 of SEC Release No. 33-8176.

You may contact John Coleman at (202) 551-3610 if you have questions regarding engineering related matters. Please contact Linda Cvrkel at (202) 551-3813 or me at (202) 551-3769 with any other questions.

Sincerely,

/s/Rufus Decker

Rufus Decker  
Accounting Branch Chief  
Office of Beverages, Apparel &  
Mining