

Mail Stop 3561

April 16, 2010

Greg L. Armstrong  
Chief Executive Officer  
PNGS GP LLC  
333 Clay Street, Suite 1100  
Houston, Texas 77002

**Re: PAA Natural Gas Storage, L.P.  
Amendment No. 2 to Registration Statement on Form S-1  
Filed April 2, 2010  
File No. 333-164492**

Dear Mr. Armstrong:

We have reviewed your amendment 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 comments are 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.

Amendment No. 2 to Form S-1 Filed April 2, 2010

Our Cash Distribution Policy and Restrictions on Distributions, page 53

Unaudited Pro Forma Available Cash from Distributable Cash Flow, page 59

1. Please disclose how pro forma expansion capital expenditures were computed.

Financial Statements, page F-1

Unaudited Pro Forma Condensed Combined Financial Statements, page F-2

Unaudited Pro Forma Condensed Combined Statement of Operations, page F-4

2. We reviewed the revisions to note (g) in response to comment 13 in our letter dated March 24, 2010. You disclose that the allocation of PAA personnel costs to PNGS increased due to increased levels of activity of PNGS; whereas your

Greg L. Armstrong  
PNGS GP LLC  
April 16, 2010  
Page 2

disclosure on page F-25 indicates that the allocation of PAA costs to PNGS increased because PNGS will now be charged for executive officer expenses not previously permitted. Please revise your disclosures for consistency or provide additional clarification, as applicable.

PAA Natural Gas Storage, LLC Consolidated Financial Statements, page F-8

Notes to Consolidated Financial Statements, page F-14

Note 2. Summary of Significant Accounting Policies, page F-14

Property, Plant and Equipment, page F-19

3. We reviewed the response to comment 16 in our letter dated March 24, 2010. Please tell us whether you considered useful life estimates used by other companies in the industry for similar assets and provide us with any such information that was considered. To the extent your estimated useful lives are significantly different than others in the industry, please explain why you believe the differences are reasonable.

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As appropriate, please amend your filing in response to these comments. 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 amendment and responses to our comments.

You may contact Adam Phippen, Staff Accountant, at (202) 551-3336 or Robyn Manuel, Staff Accountant, at (202) 551-3823 if you have any questions regarding the financial statements and related matters. Please contact Lilyanna L. Peyser, Attorney Advisor, at (202) 551-3222, Mara Ransom, Legal Branch Chief, at (202) 551-3264, or me at (202) 551-3725 with any other questions.

Sincerely,

H. Christopher Owings  
Assistant Director

cc: Tim Moore, General Counsel  
Alan Beck, Vinson & Elkins L.L.P.  
David Oleman, Vinson & Elkins L.L.P.  
Via Facsimile