



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-3561

Mail Stop 3561

May 10, 2010

J. Mike Stice
Chief Executive Officer
Chesapeake Midstream Partners, L.P.
777 NW Grand Boulevard
Oklahoma City, Oklahoma 73118

**Re: Chesapeake Midstream Partners, L.P.
Amendment No. 2 to the Registration Statement on Form S-1
Filed April 22, 2010
File No. 333-164905**

Dear Mr. Stice:

We have reviewed your amended 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 supplemental information so we may better understand your disclosure.

Summary, page 1

1. We note your response to comment 7 in our letter dated March 16, 2010 and the supplemental materials dated April 29, 2010 that you provided. Please disclose in the registration statement the basis for all of your assertions about your or your affiliates' competitive position within your industry. For example, disclose the name of the report or whether your assertion is based on your review of publicly available information. If you do not have appropriate independent support for a statement, please revise the disclosure to make clear that this is your belief based on your experience in the industry, if true. This comment is also applicable to any unsupported claims in the Business section of the filing.
2. We note your response to comment 9 in our letter dated March 16, 2010. However, your summary still does not adequately describe the business and investment risks associated with the offering. Please expand your discussion of material risks under Risk Factors on page 6. Refer to Securities Act Release No. 33-6900.

Summary Historical and Unaudited Pro Forma Financial and Operating Data, page 14

3. We note that you are presenting financial data for the “Non-GAAP Combined Year Ended December 31, 2009” here as well as in your Selected Historical and Unaudited Pro Forma Financial and Operating Data on page 75. Please remove this column and the related explanatory footnote from these tables, as we do not believe it is meaningful or appropriate to merely combine the predecessor and successor periods within 2009. We will not object if you choose to present pro forma data for the successor for the year ended December 31, 2009, provided that such pro forma data is prepared in accordance with Article 11 of Regulation S-X and only reflects the exclusion of the assets and operations retained by CMD.

Use of Proceeds, page 45

4. We note that after repaying any borrowings outstanding under your revolving credit facility, you will reserve the remaining net proceeds from this offering for future general partnership purposes, which may include the funding of capital expenditures, working capital, and acquisitions. We also note your response to comment 15 in our letter dated March 16, 2010, in which you indicate that you are not able to reasonably quantify the amount that will be applied to each of these potential uses stated. However, you indicate in the Partnership Statement of Estimated Adjusted EBITDA on page 55 that you intend to use cash on hand to fund an estimated \$223.5 million of expansion capital expenditures in the 12 months following this offering, and given the small cash balance in your historical financial statements, it appears that virtually all of this cash on hand will result from the offering. Please revise your filing to provide consistent disclosures about your intended use of proceeds from this offering. Either revise your disclosures under Use of Proceeds to quantify the estimated proceeds from the offering that will be used to fund expansion capital expenditures, consistent with your disclosures on page 55, or revise your Partnership Statement of Estimated Adjusted EBITDA on page 55 so that it no longer reflects an intention to use cash on hand resulting from the proceeds of this offering to fund your expansion capital expenditures.
5. Please clarify whether you still intend to repay borrowings under your revolving credit facility, since you disclose in the fourth paragraph that no borrowings are outstanding at April 15, 2010. Subject to your response to prior comment 4, please also clarify whether you have any current specific plans for the proceeds. If not, please provide the disclosure required by Item 504 of Regulation S-K.

Our Cash Distribution Policy and Restrictions on Distributions, page 48

6. We note your response to comment 16 in our letter dated March 16, 2010. Please clarify whether these distributions represent a return of investors' capital or a return on investors' capital. Refer to Securities Act Release No. 33-6900.

Unaudited Pro Forma Available Cash for the Year Ended December 31, 2009, page 51

7. When you update your historical financial statements to the interim period ended March 31, 2010, please revise to present calculations of pro forma available cash for both the year ended December 31, 2009 and the 12 months ended March 31, 2010.

Estimated Adjusted EBITDA for Twelve Months Ending June 30, 2011, page 53

8. We note that the most recent period of historical financial statements included in this filing is the year ended December 31, 2009. Please explain to us why you believe it is meaningful for your forward looking calculation of pro forma available cash to be for the 12 months ended June 30, 2011. To help us better understand this matter, please provide us with your estimate of when you will request effectiveness for this filing and when you will close this offering.

Assumptions and Considerations, page 56

Revenue, page 56

9. We read your response and revisions based on comment 20 in our letter dated March 16, 2010. We continue to believe that you should disclose the progress made towards the increase in the average operated rig count in your Barnett Shale acreage dedication as of a recent practicable date to provide more insight into when this increase will occur and to better support your expectation that it will occur by the end of 2010. If no progress has yet been made, please revise your disclosure to better explain what Chesapeake has conveyed to you about the expected timing of this expansion, including when it is expected to begin and end. For example, if Chesapeake has indicated that the process of drilling the new wells and connecting them to your system will be performed over approximately six months, and Chesapeake expects to begin this process in July 2010, you should clarify this. We remind you that you need to have a reasonable basis for your projections and that you should provide disclosures in this section of your filing so that your investors can understand the basis for your projections, particularly where they differ significantly from your historical results.

Operating Expenses, page 57

10. We read your response and updates based on comment 21 in our letter dated March 16, 2010. We have the following additional comments:
- We continue to believe that you should quantify how much of the expected increase is related to the new contacts with Chesapeake and Total. We would generally expect a direct relationship between the impact on revenues from changes in volume and the impact on operating expenses from changes in volume, and it remains unclear why an expected 10% increase in volumes would only result in an expected 5% increase in operating expenses. Please revise. To the extent that the net 5% increase consists of various offsetting increases and decreases in costs, please explain each significant increase and decrease that you have assumed.
 - We note that you added a discussion of your agreement to reimburse Chesapeake for its provision of certain general and administrative services. Given the description of these general and administrative services, and given your description of the types of costs that you classify as operating expenses, it appears that these services should be classified as general and administrative expenses. It is therefore unclear why you have added a discussion of these reimbursements to your analysis of operating expenses. Either explain in reasonable detail why it is more appropriate to classify these costs as operating expenses instead of as general and administrative expenses, or remove your discussion of these costs from your explanation of expected changes in your operating expenses.

General and Administrative Expenses, page 58

11. We read your response and updates based on comment 22 in our letter dated March 16, 2010. We have the following additional comments:
- We note your statement that the substantial majority of the net \$11 million increase in general and administrative expense is attributable to the establishment of your dedicated management team, the growth in your headcount consistent with the growth in your gas gathering business and the incremental expenses that you expect to incur as a result of being a publicly traded partnership. It is unclear to us that these factors fully explain the expected \$11 million increase given that your disclosures under the heading "Management" appear to indicate that your executive officers will receive annual compensation, in aggregate, of approximately \$2 million, and your repeated statements that the incremental expenses associated with being a publicly traded partnership are expected to approximate \$2 million. Please quantify the expected impact of each

factor listed to clarify how these factors in aggregate will comprise the substantial majority of the expected \$11 million increase.

- We note your discussion of the general and administrative expense reimbursement to Chesapeake. Please clarify whether any similar reimbursements were included in the pro forma \$21 million recorded for the year ended December 31, 2009, and if so, quantify such amounts to clarify the amount of the assumed increase in these costs.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 77

Results of Operations – Combined Overview, page 86

12. We note that you have presented Non-GAAP Combined Year Ended December 31, 2009 financial statement amounts on page 87 and are providing a comparative analysis of these results to your predecessor's year ended December 31, 2008. Please revise your disclosure to remove your presentation and discussion of the combined results of the predecessor and successor companies for 2009 as we do not believe this presentation is meaningful or appropriate. If you determine that a discussion in MD&A based on pro forma financial information is appropriate and enhances your discussion, you may supplement your discussion of the historical results of the predecessor and successor periods within 2009 with an analysis based upon pro forma results of the successor for the year ended December 31, 2009 as compared to pro forma results for the year ended December 31, 2008. The pro forma financial information on which the discussion is based should be prepared in accordance with Article 11 of Regulation S-X and should reflect only the exclusion of the assets and operations retained by CMD. Your pro forma analysis should explain to your readers how the pro forma presentation was derived, why you believe this presentation is useful, and any potential risks associated with using such a presentation. Additionally, unless your pro forma adjustments are limited in nature and easily understood through narrative disclosure, you should include within MD&A a pro forma income statement for the year ended December 31, 2008 to facilitate an understanding of the basis of the information being discussed. Please note that your analysis of results for 2008 as compared to 2007 should remain on a historical basis.

Liquidity and Capital Resources, page 93

13. We note your discussion of working capital (deficit) under the heading "Our Predecessor's Liquidity and Capital Resources." It is unclear why you have not provided a similar discussion of working capital for the successor company as of December 31, 2009, as we assume this would be the most relevant information to your investors. Please revise.

14. We note your presentation of cash flow data for the successor on page 94. Please provide a brief analysis of the factors that drove each of the three subtotals presented. For example, based on your pro forma financial statements, it appears that the successor may have generated a relatively large amount of revenue in the fourth quarter, and this may explain the increase in accounts receivable seen for the successor period on your audited Consolidated Statements of Cash Flows. It also appears from the pro forma financial statements that the successor generated a relatively large amount of net income in the fourth quarter. Please provide your investors with context for the successor's cash flow numbers.

Financial Statements, page F-1

Unaudited Pro Forma Financial Data, page F-2

15. Please refer to our comments earlier in this letter concerning the option to present pro forma data for the successor for the year ended December 31, 2009, giving effect only to the exclusion of the assets and operations retained by CMD. If you choose to present this pro forma information elsewhere in your filing, please add a subtotal column to your Unaudited Pro Forma Statement of Operations on page F-4 to reflect the results of the successor for the year ended December 31, 2009, excluding the adjustments for the offering.

Chesapeake Midstream Partners, LLC and Chesapeake Midstream Development, LP Consolidated Financial Statements, page F-7

Consolidated Statements of Operations, page F-10

16. Please tell us how you considered the guidance in ASC 260-10-15-2.

As appropriate, please amend your registration statement in response to these comments. Please provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your response to our comments and provides any requested supplemental 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.

J. Mike Stice
Chesapeake Midstream Partners, L.P.
May 10, 2010
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You may contact Elizabeth Sellars, Staff Accountant, at (202) 551-3348, or Jennifer Thompson, Accounting Branch Chief, at (202) 551-3737, if you have questions regarding comments on the financial statements and related matters. Please contact Ronald E. Alper, Staff Attorney, at (202) 551-3329, Brigitte Lippmann, Special Counsel, at (202) 551-3713, or me, at (202) 551-3720, with any other questions.

Sincerely,

H. Christopher Owings
Assistant Director

cc: D. Alan Beck, Jr., Esq.
Vinson & Elkins L.L.P.
Via facsimile to (713) 615-5620