



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3561

March 16, 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.
Registration Statement on Form S-1
Filed February 16, 2010
File No. 333-164905**

Dear Mr. Stice:

We have reviewed your 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. After reviewing this information, we may or may not 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. Please revise throughout to include all information that may not properly be excluded under Rule 430A. Provide all information required with respect to the offering price range, underwriting discounts, and the number of common units. Please allow us sufficient time to review your complete disclosure prior to any distribution of preliminary prospectuses.

2. Prior to the effectiveness of this registration statement, we need to receive a copy of the letter or a call from FINRA confirming that FINRA has completed its review and has no further concerns regarding the underwriting terms and arrangements pertaining to this offering.
3. Please provide us with any gatefold information such as pictures, graphics or artwork that will be used in the prospectus.
4. Please update your disclosure to comply with the amendments to Items 401, 402 and 407 of Regulation S-K that are effective February 28, 2010, as applicable. Refer to Securities Act Release No. 33-9089.
5. Please update all information in the prospectus to the most recent practicable date.

Table of Contents, page i

6. Please revise to include all the subheadings in the risk factors section. Refer to Securities Act Release No. 33-6900.

Summary, page 1

7. Please disclose the basis for all of your assertions about your or your affiliates' competitive position within your industry. If you funded or were otherwise affiliated with any of the studies or reports you cite, please disclose this. Note that if any of this information was prepared by a third party for inclusion in this registration statement, you should file the consent of such party as an exhibit. Otherwise, please confirm that these sources are widely available to the public. If you do not have appropriate independent support for a statement, please revise the language 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. The following are examples only of some of your competitive position assertions:
 - “Chesapeake is the second largest natural gas producer in the U.S....,” page 2;
 - “Total S.A. is the fifth largest integrated oil and gas company in the world....” page 2;
 - “...Chesapeake [is] the second largest natural gas producer and the leading leasehold owner in U.S. unconventional resource plays....,” page 3; and
 - “Chesapeake is the industry’s leader in unconventional natural gas drilling and production....,” page 4.

8. Please revise your prospectus to eliminate or reduce repetitive information, and to ensure that the information flows logically so that investors will more readily comprehend the significance of your disclosures. For example, the summary contains a lengthy description of the partnership's strategies and strengths on pages 3 - 5 that repeats information contained on pages 108 - 111 of the Business section of the prospectus. Please delete or shorten these sections and other unnecessary marketing language. Refer to Securities Act Release No. 33-6900 and instruction to Item 503(a) of Regulation S-K.
9. The disclosure in the summary should be a balanced presentation of your business. Please balance the description of your business with equally prominent disclosure of the challenges you face and the risks and limitations that could harm your business. The following are examples only:
 - On page 2 you state you have limited exposure to direct commodity price risk, but on page 26 you state that your exposure could increase in the future.
 - On page 2 you state that you have long-term contractual cash flow stability, but on page 22 you disclose risks relating to the gas gathering agreements.
 - On page 5 you state that you have a conservative capital structure, but on page 23 you state that your financial leverage may increase.

Refer to Securities Act Release No. 33-6900.

The Offering – Cash distributions, page 10

10. Please briefly describe and quantify the general partner's and its affiliates' fees and expenses that are paid prior to the distributions. Make similar disclosures in the risk factors on pages 19 and 34, and elsewhere in the filing as applicable. Refer to Securities Act Release No. 33-6900.

Material tax consequences, page 13

11. Please disclose that you have received a tax opinion and identify counsel.

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

Non-GAAP Financial Measure, page 16

12. We note that you presented the non-GAAP financial measure of Adjusted EBITDA. We read that you define Adjusted EBITDA as net income (loss) before income tax expense, interest expense, depreciation and amortization expense, certain non-cash charges, gains and losses from derivatives activities and selected items that are generally unusual or non-recurring. From the reconciliation on

page 17 we see that these items include the impairment of your property, plant, and equipment and other assets and the gain or loss on sale of assets. Please clarify for us if you meant to characterize impairment and gains and losses on the sale of assets as unusual or non-recurring. And if so, please explain to us why you believe this is appropriate given that you had these types of charges in both 2008 and 2009 and considering the guidance in Item 10(e)(1)(ii)(B) of Regulation S-K.

Risk Factors, page 18

13. We note your impairment disclosure on page 88. Please include appropriate risk factor disclosure if you believe that future impairment charges may occur in your business.

Tax Risks To Common Unitholders, page 40

14. We note your disclosure on page 175 that your tax counsel is unable to opine on specific federal income tax issues. Please include appropriate risk factor disclosure, including that counsel will not provide an opinion on these issues. Refer to Securities Act Release No. 33-6900.

Use of Proceeds, page 45

15. Please quantify the amount you intend to use for each stated purpose.

Our Cash Distribution Policy and Restrictions on Distributions, page 48

16. In this section and under Provisions of Our Partnership Agreement Relating to Cash Distributions beginning on page 60, please clarify whether the distributions represent a return of investors' capital or a return on investors' capital. Please also describe in greater detail the operating fees and expenses paid to the general partner and its affiliates and quantify these payments. Refer to Securities Act Release No. 33-6900.

Partnership Statement of Estimated Adjusted EBITDA, page 55

17. We note that you are adding cash on hand to fund expansion capital expenditures to your estimated Adjusted EBITDA when calculating your estimated cash available for distribution. Given that your pro forma financial statements indicate that you have minimal cash on hand prior to this offering, we assume that this forecasted cash on hand at December 31, 2010 will primarily result from your offering. Please provide a footnote or significantly expand your assumptions regarding cash as seen on page 59 to explain in detail how you determined that this was a reasonable estimate for cash on hand at December 31, 2010. To the extent that a material portion of this cash will result from nonrecurring sources

such as your offering, you should clearly disclose that to your investors and discuss the implications this has on your ability to generate sufficient cash to pay the minimum annual cash distributions in future years.

18. We note your subtotal titled "Total distributions." Please revise the title of this line to clarify, if true, that this subtotal represents total minimum annual cash distributions. If our understanding of this subtotal is incorrect, please explain to us in more detail and revise the title of this line to better convey what this subtotal represents.

Assumptions and Considerations, page 56

19. We read under the heading "General Considerations" that your forecasted results are not directly comparable with your historical periods. Given the significant differences in your forecasted results as compared to your historical periods, please ensure that you provide a robust discussion of each underlying factor that contributes to the expected differences, or provide a cross-reference to where this disclosure is provided elsewhere in your filing, and quantify the impact of each factor on your results where practicable.
20. We have the following comments concerning your discussion of forecasted revenues:
 - a. We read in your discussion of volumes that you expect Chesapeake to increase its average operated rig count in your Barnett Shale acreage dedication by more than 40% relative to fourth quarter 2009 levels. However, we note that your total volumes are expected to increase by only 10% as compared to the 12 months ended September 30, 2009. We assume that your volumes will not increase by a higher percentage because it will take a certain amount of time for Chesapeake to increase its average operated rig count by the expected 40%. Please clarify to your investors the expected timetable for this 40% increase, including disclosing the expected date that this increase will be completed, whether the increase is expected to be completed by year end, and the progress made towards this increase as of the most recent practicable date. Also quantify your historical volume from the Barnett Shale versus your forecasted volume from the Barnett Shale to clarify how this increase in average operated rigs will translate into volume increases during 2010. To the extent that your forecasted volume from the Barnett Shale is more than 418 Bcf, please explain how you expect to reach that forecasted volume in light of your disclosure under the heading "Minimum Volume Commitment Payment" that you expect Chesapeake to have to pay you cash to reach its specified minimum volume commitment of 418 Bcf for the Barnett Shale.
 - b. We read in your discussion of fees that your fees are projected to increase in 2010 in part due to the embedded annual fee escalators in those contracts. Your reference to "those" contracts appears to refer to your new gathering

contracts with Chesapeake and Total that are discussed earlier in your sentence; however, since you disclose elsewhere that these contracts were recently signed, it is unclear to us why an annual fee escalator would impact your fees during what appears to be the first year of the contract. Your reference to embedded annual fee escalators also is unclear given your disclosure under the heading "Fee Redetermination," which indicates that you agreed with Chesapeake not to undertake a fee redetermination for 2010 related to your Mid-Continent gathering systems. Please revise to better explain this matter.

21. We note your disclosures concerning the forecasted minimal net change in your operating expenses. Please revise to quantify the expected increase resulting from the new contracts with Chesapeake and Total that are the primary drivers behind your forecasted increase in revenues. To the extent that the percentage of expected increase in operating expenses from these new contracts is not consistent with the percentage of expected increase in revenues, please explain why as we would generally expect a direct relationship between the variance in your revenues and the variance in your operating expenses. Please also better explain the expected offsetting decrease in operating expenses that will result from the capitalization of certain labor costs related to the construction of your systems. This is particularly unclear given that you expect significantly reduced capital expenditures in 2010 as compared to prior periods, which we assume would result in a reduction of capitalized labor costs.
22. We note your disclosures concerning the forecasted increase in your general and administrative expenses. Please explain, or provide a cross-reference to the explanation of, your reference to the establishment of your independent management team. Ensure that you clarify when these officers were hired to indicate whether their compensation is included in any portion of the prior periods. If you are referring to the executive officers discussed in the "Management" section of your filing beginning on page 124, please reconcile your disclosures under that section of the filing to the fact that you are indicating here that these executive officers are the primary reason for a \$9 million increase in your annual expenses. Also clarify the context in which these officers are "independent" since we understand that you are managed by your general partner, and your general partner's officers are employees of Chesapeake.

23. We note your disclosures concerning the forecasted capital expenditures. Given your disclosures elsewhere concerning your new 20-year gas gathering agreements with Chesapeake and Total and the fact that these agreements require you to connect Chesapeake and Total operated natural gas drilling pads and wells to your gathering systems, we would expect these agreements to result in a significant amount of capital expenditures in 2010. It is unclear to us why your forecasted capital expenditures for 2010 would be less than your capital expenditures in previous periods. Please revise to better explain why you had relatively higher capital expenditures in previous periods such that your capital expenditures are expected to decrease in 2010 despite the new gas gathering agreements.

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

Results of Operations, page 87

Impairment of Property, Plant, and Equipment and Other Assets, page 88 and 90

24. We note that you recorded significant impairment charges primarily related to certain gathering systems in the Mid-Continent region in the year ended December 31, 2008 and the nine months ended September 30, 2009. Please provide more information as to the facts and circumstances that caused the expected future cash flows to not be in excess of the book value of these systems. For example, if there has been a change in the use or utilization of the assets, a change in the physical condition of the assets, or a change in the business climate you should explain this to your potential investors. We remind you that one of the primary objectives of management's discussion and analysis is to provide enough context around your results as well as insight into the underlying factors that influenced your results such that investors can ascertain the likelihood that past performance is indicative of future performance. Also, given that you have stated that you do not consider these losses to be recurring events in the third bullet point on page 84, we believe you should provide more facts to support this assessment.

Liquidity and Capital Resources, page 92

Our Predecessor's Liquidity and Capital Resources, page 92

Working Capital (Deficit), page 92

25. We read that as of September 30, 2009 your predecessor had working capital of \$155.4 million compared to a working capital deficiency of (\$60.7) million at December 31, 2008. However, later in the same paragraph we read that your

predecessor had a working capital deficiency of (\$4.6) million at September 30, 2009 compared to a deficiency of (\$99.9) million at December 31, 2008. These statements appear to provide two different working capital amounts for the same time periods. Please explain this to us in reasonable detail or revise these statements.

Critical Accounting Policies and Estimates, page 95

26. Please revise the discussion of your critical accounting policies to focus on the assumptions and uncertainties that underlie your critical accounting estimates. Please also quantify, where material, and provide an analysis of the impact of critical accounting estimates on your financial position and results of operations for the periods presented, including the effects of changes in critical accounting estimates between periods. In addition, please include a qualitative and quantitative analysis of the sensitivity of reported results to changes in your assumptions, judgments, and estimates, including the likelihood of obtaining materially different results if different reasonably likely assumptions were applied. For example, if reasonably likely changes in an assumption used in testing your long-lived assets for impairment or determining your asset retirement obligation would have a material effect on your financial condition or results of operations, the impact that could result given the range of reasonably outcomes should be disclosed and quantified. Refer to Section V of our Release No. 33-8350.

Business – Legal Proceedings, page 123

27. We note your disclosure that you are party to various regulatory proceedings. Please confirm that no disclosures are required here, taking into account Instruction 5 to Item 103 of Regulation S-K.

Certain Relationships and Related Party Transactions, page 139

28. Please disclose the information required by Item 404(b) of Regulation S-K.

Distributions and Payments to Our General Partner and Its Affiliates, page 139

29. We note the information contained in the table on page 139. Please include a summary tabular presentation, itemizing by category and specifying dollar amounts where possible, of all compensation, fees, profits, and other benefits (including reimbursement for out of pocket expenses) which the general partner and its affiliates may earn or receive in connection with the offering or operation of the partnership. Refer to Securities Act Release No. 33-6900 and Industry Guide 5.

Agreements with Affiliates, page 140

30. As applicable, please also disclose the approximate dollar value of the amount involved in each of the transactions listed in this section. Refer to Item 404(a)(3) of Regulation S-K.

Indemnification, page 144

31. Please expand this discussion to specify your indemnification obligations and those of Chesapeake.

Conflicts of Interest and Fiduciary Duties, page 150

Fiduciary Duties, page 155

Rights and remedies of unitholders, page 156

32. Please also explain the defenses available to the general partner. Refer to Securities Act Release No. 33-6900.

The Partnership Agreement, page 160

33. Please also include a description of the operating agreement of Chesapeake MLP Operating, L.L.C. since it appears that you are dependent upon distributions from this entity to fund distributions on the common units. Please also file the operating agreement as an exhibit.

Material Tax Consequences, page 175

34. Please revise the language in the first sentence of the last paragraph in this section, which may imply that investors are not entitled to rely on the tax opinion. We would not object if you recommended that investors consult their own tax advisors with respect to the personal tax consequences of the investment which may vary for investors in different tax situations.

Financial Statements, page F-1

35. Please update your financial statements and related disclosures, as necessary, to comply with Rule 3-12 of Regulation S-X at the effective date.

Unaudited Pro Forma Financial Data, page F-2

36. Please revise your disclosures to explain why the partnership pro forma accrued liabilities exceed the predecessor historical accrued liabilities. Given that pro forma adjustment (a) is eliminating the assets and liabilities retained by your predecessor, we would expect any adjustment to this liability account to reflect a reduction.
37. Please revise pro forma adjustment (a) to better explain how you determined the historical results that were associated with the assets and liabilities retained by your predecessor. Since it appears that the contributed and retained businesses were managed together and financed together by your predecessor during the periods presented, we believe you should explain in reasonable detail the assumptions that underlie your calculation of the revenues and expenses associated with the retained businesses versus those associated with the contributed businesses. Also better explain to your investors, or provide a cross-reference to the explanation of, why the eliminated assets represent approximately 42% of the predecessor's total assets but the eliminated revenues and operating expenses represent a much smaller percentage of the predecessor's results.

Financial Statements of Chesapeake Midstream Development, L.P. for the Nine Months Ended September 30, 2009, page F-8

Consolidated Statements of Operations, page F-9

38. Please explain to us how you considered disclosing the revenues and expenses from related parties on the face of the income statement. Refer to Item 4-08(k) of Regulation S-X.
39. We note that you present a subtotal titled "Total expenses." Based on the items included in and excluded from this subtotal, we assume that this subtotal is intended to represent the expenses that would be included in the subtotal "Operating Income." Please confirm our assumption, or explain why our assumption is incorrect. If our assumption is correct, please explain how you considered disclosing a subtotal for operating income on your statements of operations as we believe this metric is useful to your investors. If our assumption is incorrect, please explain how you determined that presentation of the subtotal "Total expenses" was meaningful and consistent with the guidance in Rule 5-03 of Regulation S-X.

40. We note that you have classified the line item titled "Gain (loss) on sale of assets" below your subtotal titled "Total expenses." Based on the guidance in FASB ASC 360-10-45-4, we would expect any gain or loss on sale of assets to be captured within the subtotal Operating Income. Therefore, it appears that this line item should also be captured within your subtotal Total Expenses. Please advise or revise.

Notes to the Unaudited Consolidated Financial Statements, page F-12

Note 3. Joint Venture, page F-13

41. We read that during the nine months ended September 30, 2009, CMD recorded an \$86.2 million impairment of certain of the gathering systems contributed to CMP prior to the formation of the joint venture. Please ensure that you provide all disclosures indicated by FASB ASC 360-10-50-2.

Note 8. Subsequent Events, page F-16

42. When you update your financial statements, please comply with ASU 2010-09.

Financial Statements of Chesapeake Midstream Development, L.P. for the Year Ended December 31, 2008, page F-17

Note 3. Summary of Significant Accounting Policies, page F-23

Impairment of Long-Lived Assets, page F-24

43. We note that you recorded significant impairment charges for the year ended December 31, 2008 and the nine months ended September 30, 2009. Please tell us how you considered disclosing the facts and circumstances that led to the impairment as required by FASB ASC 360-10-50-2.

Note 5. Stock-Based Compensation, page F-26

44. Please provide all disclosures indicated by FASB ASC 718-10-50-2 for equity awards reflected in your financial statements, or tell us why you do not believe such disclosures are required.

Part II

Item 16. Exhibits, page II-5

45. Please file all required exhibits in a timely manner so that we may have sufficient time to review them before you request effectiveness of your registration statement. See Item 601 of Regulation S-K.
46. We note that several of the exhibits that you plan to file by amendment are “form of” agreements. Please confirm that the “form of” agreements that you plan to file will be consistent with Instruction 1 to Item 601 of Regulation S-K, and that any “form of” agreement that deviates from the final agreement in any way will be re-filed accordingly.

Exhibit 23.1 Consent of the Independent Registered Public Accounting Firm

47. We note that the Consent from your auditors refers the balance sheet of Chesapeake Midstream Partners, L.P. as of February 15, 2010 and the balance sheet of Chesapeake Midstream GP, L.L.C. as of February 15, 2010. We also note that the balance sheets of these two entities included in the Registration Statement are as of February 12, 2010. Please provide a revised Consent that refers to the financial statements included in the Registration Statement.

Item 17. Undertakings, page II-6

48. Please note that due, in part, to the language of Securities Act Rule 430C(d), the undertakings included in Items 512(a)(5)(ii) and 512(a)(6) of Regulation S-K should be included in filings for initial public offerings. Please revise your filing to include those undertakings.

* * * * *

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 responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. In your responses, please include the page numbers of the amendment where we can find the changes. Please understand that we may have additional comments after reviewing your amendment and 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 Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in

J. Mike Stice
Chesapeake Midstream Partners, L.P.
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possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

J. Mike Stice
Chesapeake Midstream Partners, L.P.
March 16, 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