



DIVISION OF  
CORPORATION FINANCE

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

November 18, 2010

Robert G. Phillips  
President and Chief Executive Officer  
Crestwood Midstream Partners LP  
717 Texas Avenue, Suite 3150  
Houston, Texas 77002

**Re: Crestwood Midstream Partners LP**  
**Form 10-K for Fiscal Year Ended December 31, 2009**  
**Filed March 15, 2010**  
**Form 10-Q for Fiscal Quarter Ended September 30, 2010**  
**Filed November 8, 2010**  
**File No. 001-33631**

Dear Mr. Phillips:

We have reviewed your letter dated November 11, 2010 in response to our comment letter dated October 29, 2010 and have the following comment. In our comment, we may ask you to provide us with information so we may better understand your disclosure.

You should comply with this comment in all future filings, as applicable. Please confirm in writing that you will do so, and also explain to us in sufficient detail for an understanding of the disclosure how you intend to comply by providing us with your proposed revisions.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to this comment, we may have additional comments.

Form 10-Q for Fiscal Quarter Ended September 30, 2010

1. We note your response to comment 2 in our letter dated October 29, 2010 and the related revisions in your filing. However, it appears that exhibit 10.1, the Credit Agreement dated October 1, 2010, does not include all of the referenced schedules. Please advise or refile a complete copy of this agreement.

Please contact Angie Kim, Staff Attorney, at (202) 551-3535, Brigitte Lippmann, Special Counsel, at (202) 551-3713, or me at (202) 551-3720 with any questions.

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Sincerely,

H. Christopher Owings  
Assistant Director

cc: William Manias, Chief Financial Officer