

Enterprise GP Holdings L.P.
1100 Louisiana, 10th Floor
Houston, Texas 77002

June 3, 2009

Mr. H Christopher Owings
Assistant Director
Division of Corporation Finance
United States Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549-0404

**Re: Enterprise GP Holdings L.P. (the "Registrant")
Form 10-K for the Fiscal Year Ended December 31, 2008
Filed March 2, 2009
File No. 1-32610**

Dear Mr. Owings:

In this letter, we are setting forth the response of the Registrant to the comments contained in the letter from the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") dated May 29, 2009 (the "Comment Letter"), with respect to the above captioned filing. For your convenience, we have repeated the Staff's comments as set forth in the Comment Letter. The Registrant's response to each comment is set forth immediately below the text of the applicable comment.

Unless the context requires otherwise, references to "we," "us," "our," "Partnership," and similar expressions are intended to mean the business and operations of Enterprise GP Holdings L.P. and its consolidated subsidiaries. References to "EPCO" mean EPCO, Inc.

Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2008

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Certain Relationships and Related Transactions, page 122

Relationship with EPCO and affiliates, page 122

EPCO Administrative Services Agreement, page 123

1. We reviewed your response to comment five in our letter dated May 11, 2009. In future filings please also disclose for each period for which you report compensation the amount of time devoted by each of your named executive officers to your business and that of your affiliates.

Response

We note your comment and will include in future filings the amount of time devoted by each named executive officer to our business and those of our affiliates for each period for which we report compensation.

Item 15. Exhibits and Financial Statement Schedules, page 131

2. We reviewed your response to comment six in our letter dated May 11, 2009. Please revise your proposed future disclosure to remove the statement that investors should not rely on the representations, warranties or other provisions in your exhibits as constituting or providing any factual disclosures about you, any state of affairs or other matters. We acknowledge that facts and circumstances regarding your current state of affairs may have changed from the date of such agreements. Please revise to refer investors

to both the factual statements in the representations, warranties or other provisions in your exhibits as well as the disclosure in your public reports filed with us.

Response

In connection with this comment and previous comment six in your letter dated May 11, 2009, in future filings, we will not include either the prior disclaimer or the proposed revised disclaimer, or any similar disclaimers, in order to avoid any potential implication that the referenced agreements do not constitute public disclosure under the federal securities laws.

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In connection with responding to the Staff's comments, the Registrant acknowledges that:

- § it is responsible for the adequacy and accuracy of disclosures in its filings;
- § Staff comments or changes to disclosures in response to Staff comments do not foreclose the Commission from taking any action with respect to its filings; and
- § it may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please direct any questions that you have with respect to the foregoing responses to the undersigned at (713) 381-6545 (direct line) or (713) 381-6938 (fax).

Regards,

/s/ Michael J. Knesek

Name: Michael J. Knesek
Title: Senior Vice President, Controller and
Principal Accounting Officer of
EPE Holdings LLC, general partner of
Enterprise GP Holdings L.P.

cc: Dr. Ralph S. Cunningham
W. Randall Fowler
Richard H. Bachmann
Michael Hanson
Stephanie Hildebrandt
David Buck (Andrews Kurth)
Chris Wade
