



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

April 16, 2012

Via E-mail

Mr. Nathan Ticatch
President and Chief Executive Officer and Director
PetroLogistics LP
600 Travis Street, Suite 3250
Houston, TX 77002

**Re: PetroLogistics LP
Amendment No. 5 to Registration Statement on Form S-1
Filed April 3, 2012
File No. 333-175035**

Dear Mr. Ticatch:

We have reviewed your registration statement and have the following comments.

Assumptions and Considerations, page 56

1. Please clarify whether the per unit distribution amount that you expect to pay in your fiscal year ended June 30, 2013 is a quarterly or an annual amount. In this regard, we note disclosure on page 51 under "Our Cash Distribution Policy" stating that you intend to make distributions on a quarterly basis.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 64

Liquidity and Capital Resources, page 73

New Credit Facilities, page 74

2. Please disclose whether during the term of the loan you are required to comply with any financial ratios, and to the extent applicable, provide qualitative and quantitative disclosure about these ratios. In this regard, we note that the new credit agreement (Exhibit 10.11) contemplates a number of financial ratios, including but not limited to, the Fixed Charge Coverage Ratio or the Total Secured Leverage Ratio. In addition, please ensure to file a complete copy of your new credit agreement, including all of the schedules and exhibits which are currently missing from Exhibit 10.11, with your next pre-effective amendment.

Mr. Nathan Ticatch
PetroLogistics LP
April 16, 2012
Page 2

Exhibit 5.1 – Opinion of Vinson & Elkins L.L.P., as to the legality of the securities being registered

3. Please have counsel revise its opinion to opine that the Common Units being offered by the Selling Unitholder are duly authorized, validly issued, fully paid and non-assessable. Refer to Section II.B.2.h of Staff Legal Bulletin No. 19 dated October 14, 2011.

You may contact Kevin Stertzell, Staff Accountant, at (202) 551-3723 or John Cash, Accounting Branch Chief, at (202) 551-3768 if you have questions regarding comments on the financial statements and related matters. Please contact Era Anagnosti, Staff Attorney, at (202) 551-3369 or me at (202) 551-3760 with any other questions.

Sincerely,

/s/ Pamela Long

Pamela Long
Assistant Director

cc: Via E-mail
Mike Rosenwasser, Esq.
James J. Fox, Esq.
Vinson & Elkins L.L.P.