



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

October 5, 2011

Via E-mail

Mr. Nathan Ticatch  
President and Chief Executive Officer and Director  
PetroLogistics LP  
909 Fannin Street, Suite 2630  
Houston, TX 77010

**Re: PetroLogistics LP**  
**Amendment No.2 to Registration Statement on Form S-1**  
**Filed: September 29, 2011**  
**File No.: 333-175035**

Dear Mr. Ticatch:

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

Compensation Discussion and Analysis, page 102

Executive Compensation, page 107

1. Refer to comment 12 in our letter dated August 15, 2011. It appears that instead of removing the disclosure here as no longer applicable, you have removed the first half of the "Employment Agreements" disclosure on page 107. Please revise accordingly.

Certain Relationships and Related Party Transactions, page 116

Brock Maintenance Contracts, page 118

2. We note your response to comment 14 in our letter dated August 15, 2011. Please file any agreements with Brock Maintenance, Inc. as exhibits to the registration statement.

Mr. Nathan Ticatch  
PetroLogistics LP  
October 5, 2011  
Page 2

You may contact Kevin Stertz, 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 A. Long

Pamela A. Long  
Assistant Director

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