



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4628

January 27, 2017

Via E-mail
Scott McNeill
Chief Financial Officer
RSP Permian, Inc.
3141 Hood Street, Suite 500
Dallas, Texas 75219

**Re: RSP Permian, Inc.
Form 10-K for Fiscal Year Ended
December 31, 2015
Filed February 25, 2016
File No. 1-36264**

Dear Mr. McNeill:

We have completed our review of your filing. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Sincerely,

/s/H. Roger Schwall

H. Roger Schwall
Assistant Director
Office of Natural Resources