



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4628

January 27, 2017

Steven Gray
Chief Executive Officer
RSP Permian, Inc.
3141 Hood Street, Suite 500
Dallas, TX 75219

**Re: RSP Permian
Preliminary Proxy Filed on Schedule 14A
Filed December 19, 2016
File No. 1-36264**

Dear Mr. Gray:

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 by the staff.

Sincerely,

/s/H. Roger Schwall

H. Roger Schwall
Assistant Director
Office of Natural Resources