



DIVISION OF
CORPORATION FINANCE

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

September 26, 2017

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

**Re: RSP Permian, Inc.
Registration Statement on Form S-4
Filed September 18, 2017
File No. 333-220508**

Dear Mr. Gray:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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.

Please contact Anuja A. Majmudar, Attorney-Advisor, at (202) 551-3844 with any questions.

Sincerely,

/s/ Kevin M. Dougherty for

H. Roger Schwall
Assistant Director
Office of Natural Resources

cc: Julian J. Seiguer
Vinson & Elkins, L.L.P.