

Natural Gas Service Group, Inc.
508 West Wall Street, Suite 550
Midland, Texas 79701
Phone: (432) 262-2700
Fax: (432) 262-2701

February 12, 2013

Via Edgar

Anne Nguyen Parker, Branch Chief
Caroline Kim, Staff Attorney
United States Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549-5561

Re: Natural Gas Services Group, Inc.
Form S-3/A
File No. 333-184672

Ladies and Gentlemen:

Pursuant to Rule 461 of the General Rules and Regulations under the Securities Act of 1933, as amended, we hereby request acceleration of the effective date of the referenced Form S-3/A Registration Statement for Natural Gas Service Group, Inc. (the "Company"), to 10:00 a.m. Eastern Standard Time on February 15, 2013, or as soon thereafter as practicable. We hereby confirm that management of the Company is aware of its obligations under the Securities Act of 1933 and the Securities Exchange Act of 1934.

We hereby acknowledge the following:

- Should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- The action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the registrant from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- The Company may not assert this action as defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If there are any comments or questions with respect to the Registration Statement or the acceleration thereof, please contact our legal counsel, David A. Thayer, at (303) 785-1623.

Very truly yours,

/s/ Stephen C. Taylor

Stephen C. Taylor
Chief Executive Officer