



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

DIVISION OF
CORPORATION FINANCE

December 14, 2010

Mr. Earl R. Wait
Vice President of Accounting
Natural Gas Services Group, Inc.
508 W. Wall Street, Suite 550
Midland, Texas 79701

**Re: Natural Gas Services Group, Inc.
Form 10-K for Fiscal Year Ended
December 31, 2009
Filed March 4, 2010
Form 10-Q for Fiscal Quarter Ended
September 30, 2010
Filed November 3, 2010
File No. 001-31398**

Dear Mr. Wait:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-Q for Fiscal Quarter Ended September 30, 2010

Management's Discussion and Analysis of Financial Condition and Results of Operations

Results of Operations

Nine Months Ended September 30, 2009 Compared to the Nine Months Ended September 30, 2010, page 11

1. We note that revenue for your Sales segment decreased from \$41,380,000 for the fiscal year ended December 31, 2008 to \$21,657,000 for the fiscal year ended December 31, 2009 (i.e., approximately \$19,723,000 and 47.8%) and from \$16,813,000 for the nine months ended September 30, 2009 to \$6,936,000 for the nine months ended September 30, 2010 (i.e., approximately \$9,877,000 and 58.7%). We also note that you attributed these decreases to lower demand for your products due to an industry slowdown. With a view toward future disclosure, please provide us with a detailed analysis of the significant underlying factors identified by management which caused these decreases. In addition, please provide a discussion of management's expectations for the future operating performance of your Sales segment including the anticipated demand for your products.

Item 4 – Controls and Procedures

Evaluation of Disclosure Controls and Procedures, page 16

2. We note your statement that your "controls and procedures can only provide reasonable, not absolute, assurance" that the objectives of your system of controls will be met. Please confirm that in future Exchange Act filings you will revise to state, if true, that your disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives and that your principal executive officer and principal financial officer concluded that your disclosure controls and procedures are effective at that reasonable assurance level. In the alternative, you may remove the reference to the level of assurance provided by your disclosure controls and procedures.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;

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- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Suying Li at (202) 551-3335 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3311 with any other questions.

Sincerely,

Ethan Horowitz
Branch Chief