February 6, 2009

Via Fax and EDGAR

Mr. H. Roger Schwall Assistant Director Division of Corporation Finance United States Securities and Exchange Commission 100 F Street, N.E. Washington, D.C. 20549 Mail Stop 7010

> Re: TGC Industries, Inc. (the "Company") Form 10-K for the Fiscal Year Ended December 31, 2007 Filed March 14, 2008, File No. 001-32472

Dear Mr. Schwall:

We are in receipt of the Commission's comment letter dated December 30, 2008. To facilitate your review of our responses to your letter, our responses have been inserted directly below each comment in the enclosed "reproduction" of the original Commission letter. After we have been advised that the proposed responses are sufficient, we will include such disclosures in the Company's filings. The Company respectfully requests that the Commission allow the Company to include such revised disclosure in its upcoming Form 10-K for the year ended December 31, 2008 and proxy statement for its 2009 annual meeting of shareholders, as opposed to revising the documents relating to the previous fiscal year.

In addition to our responses to your comments, we acknowledge the following:

- 1) the Company is responsible for the adequacy and accuracy of the disclosure in the filing;
- 2) 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.

We appreciate your assistance with our compliance with the applicable disclosure requirements and with the enhancement of the disclosures in our filings. If you have any questions concerning our responses, please contact the undersigned.

Sincerely,

/s/ JAMES K. BRATA

James K. Brata Chief Financial Officer TGC Industries, Inc.

Enclosure

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

Mail Stop 7010

December 30, 2008

<u>Via U.S. Mail</u>

Kenneth Uselton Secretary and Treasurer TGC Industries, Inc. 101 East Park Boulevard, Suite 955 Plano, Texas 75074

> Re: TGC Industries, Inc. Form 10-K Filed March 14, 2008 File No. 001-32472

Dear Mr. Uselton:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Risk Factors

We are dependent upon significant customers, page 6

1. We note that your two largest customers accounted for approximately 22.0% of your revenues in 2007. Include the disclosure required by Item 101(c)(1)(vii). Further, please file all material contracts with these customers as exhibits to your Form 10-K or tell us why you do not believe it is appropriate to do so.

Company Response:

The Company believes that the disclosure as it appears in our filing complies with Item 101(c)(1)(vii) as management of the Company does not believe that the loss of either of its two largest customers would have a material adverse effect on the Company and its subsidiaries taken as a whole. The Company bases its belief upon the fact that at the date of filing its Form 10-K for the year ended December 31, 2007, market demand exceeded the capacity of seismic data acquisition companies operating in the continental United States.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, page 47

2. Please furnish the information required by Item 201(d) of Regulation S-K or tell us why such information is not required.

Company Response:

The information required by Item 201(d) of Regulation S-K can be found in Note H to the financial statements which are included in the Company's Form 10-K for the year ended December 31, 2007. We will ensure that the information that is required by Item 201(d) of Regulation S-K will appear in the Company's Form 10-K for the year ended December 31, 2008 in the format set forth therein.

Schedule 14 A Definitive Proxy Statement, filed April 25, 2008

Executive Compensation, page 14

3. You indicated that annual cash bonuses are used to reward executives for the achievement of "annual company and individual performance objectives." However, you do not include a discussion of the annual company or individual performance objectives, other than the profitability of the Company. Please supplementally provide us with modified disclosure including all the information required by Item 402(b).

Company Response:

We propose to amend the Executive Compensation disclosure in the Company's proxy statement for its 2009 annual meeting of shareholders as follows (changes underlined):

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Overview of Compensation

Since October 16, 2007, the members of the Compensation Committee have been Messrs. McInnes, Gardner, Flynn, and Ms. Hurtt. Prior to the formation of the Committee, the Company's compensation policy and annual compensation applicable to the Company's executive officers was performed by the Board of Directors. The Compensation Committee has the responsibility for establishing and implementing the Company's overall executive compensation philosophy. Throughout this proxy statement, the individuals who served as the Company's Chief Executive Officer, Vice President and Chief Financial Officer during 2007, included in the Summary Compensation Table, are referred to as the "named executive officers."

Compensation Philosophy and Objectives

The primary objectives of our compensation policy are to build shareholder value and recognize the contributions each executive makes to the Company's success. In setting compensation levels, the Compensation Committee has established the following compensation philosophy and objectives for the Company's officers:

Align the interests of executives, including the Company's executive officers, with those of the shareholders. The Compensation Committee believes it is appropriate to tie a portion of executive compensation to the value of the Common Stock in order to more closely align the interests of executive officers with the interests of shareholders. The Compensation Committee

also believes that executives should have a meaningful ownership interest in the Company and has established and regularly reviews executive stock ownership.

Have a significant portion of pay that is performance-based. The Company expects superior performance. The Company's executive compensation programs are designed to reward executives based on performance. The Compensation Committee believes that compensation paid to executives should closely align <u>their performance with</u> the performance of the Company on both a short-term and long-term basis.

Provide competitive compensation. The Company's executive compensation programs are designed to attract, retain and motivate highly qualified executives critical to achieving the Company's strategic objectives and building shareholder value.

The Compensation Committee reviews the Company's compensation philosophy and objectives each year to determine if revisions are necessary in light of market conditions, the Company's strategic goals, or other relevant factors. The Company's Chief Executive Officer, who is also a member of the Board, does not serve as a member of the Committee and participates in setting executive compensation other than his own. The Compensation Committee reviews the individual performance of each executive officer and the financial performance of the Company. The Compensation Committee also takes into account salary levels, bonus plans, stock incentive plans, and other compensation packages made available to executive officers of companies of similar size and nature.

The Compensation Committee uses a variety of compensation elements to reach its compensation objectives, including current salary, bonus opportunity and long term equity-based incentives, all of which are discussed in detail below. Specifically, the Compensation Committee believes that executive compensation should include the following three components:

- *Annual Base Salary.* The Company's objectives are to target annual base salary at the median level and to make it competitive, when taken in conjunction with the other compensatory elements, to attract and retain executives.
- Annual Cash Bonus Opportunity. The Company uses annual cash bonuses to reward executives for the achievement of annual company and individual performance objectives. See "Executive Compensation Annual Cash Bonus Opportunity."
- *Long-Term Equity-Based Incentives*. The Company utilizes stock related plans including options and stock grants as long-term equity-based incentives to foster a long-term view of what is in the best interests of the Company and its shareholders by better aligning the interests of the executives with those of the shareholders.

Annual Base Salary

The Compensation Committee reviews and approves annual compensation for senior executive officers, consisting of base salary and bonus (discussed below), on an annual basis. The Compensation Committee may request additional information and analysis and ultimately determines in its discretion whether to approve any recommended changes in compensation.

The Company pays its executive officers a base salary to remain competitive in the market. The base salaries are less performance-based than the annual cash bonuses and long-term equity-based incentives. During 2007, the salaries of certain named executive officers were increased as follows: \$31,539 in Mr. Whitener's salary to \$206,539; \$39,793 in Mr. Winn's salary to \$153,314 and \$31,845 in Mr. Uselton's salary to \$110,451. These salary increases were largely reflective of the Committees' perception of individual performance, competitiveness of salary in the marketplace and inflation adjustments.

Annual Cash Bonus Opportunity

In order to provide incentives for future annual performance, the Company believes that a meaningful portion of certain executive officers' and other key employees' compensation should be in the form of a cash incentive bonus. Cash incentive bonus payments are discretionary and are based primarily on the executive officer's contribution to the Company's profitability over the applicable performance measurement periods. The Company believes that profitability is the most useful measure of management's effectiveness in creating value for the shareholders of the Company. The Company's policy is to set aside in a bonus pool a portion of its pre-tax profit as determined by the Company's Chief Executive Officer and approved by the Board. No specific formula is used in making such bonus determinations to the individuals eligible to participate in the bonus pool but senior management determines the allocation of the bonus pool based on the performance of the participants each year. Executive officers' performance is measured using both financial and non-financial criteria. In addition to the executive officers' contribution to the Company's profitability, executives must lead the Company, develop personnel, and continually improve the Company's services and operations.

Messrs. Winn and Uselton are the two named executive officers who are eligible for annual cash bonuses under the Company's bonus plan. In December of 2007, Messrs. Winn and Uselton received cash bonuses of \$30,000 and \$18,000, respectively. These bonuses were paid out of the bonus pool based on the Company's 2007 performance. In December 2006, Messrs. Winn and Uselton, were paid cash bonuses of \$30,000 and \$18,000, respectively. These bonuses were paid out of the bonus pool based on the Company's 2006 performance. The bonuses received by Mr. Whitener are covered by his employment agreement. See "Executive Compensation — Employment Agreement" for a description of the employment agreement between the Company and Mr. Whitener.

Long-Term Equity-Based Incentives

The Company believes that the best way to align the interests of the executive officers and its shareholders is for such officers to own a meaningful amount of its Common Stock. In order to reach this objective and to retain its executives, the Company grants equity-based awards to the executive officers under its 1999 Stock Option and 2006 Stock Awards Plans.

Compensation Committee Report

The Compensation Committee has reviewed and discussed the Compensation Disclosure and Analysis with management of the Company. Based on the review and discussions referred to in the preceding sentence, the Compensation Committee has recommended to the Board of Directors that the Compensation Disclosure and Analysis be included in the proxy statement.

The Compensation Committee: Allen T. McInnes, Chairman Herbert M. Gardner Edward L Flynn Stephanie P. Hurtt

Closing Comments

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate

our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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 connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

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

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Please contact Tracey L. McNeil at (202) 551-3392 or, in her absence, John W. Madison at (202)-551-3296 with any questions.

Sincerely,

H. Roger Schwall Assistant Director