



DIVISION OF
CORPORATION FINANCE
Mail Stop 7010

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

February 26, 2008

By U.S. Mail and facsimile

Mr. John R. Irwin
President and Chief Executive Officer
Atwood Oceanics Inc.
15835 Park Ten Place Drive
Houston, Texas 77084

**Re: Atwood Oceanics Inc.
Form 10-K for fiscal year ended September 30, 2007
Filed November 29, 2007**

**Form 10-Q for fiscal quarter ended December 31, 2007
Filed February 8, 2008**

**Schedule 14A
Filed January 14, 2008**

File No. 1-13167

Dear Mr. Irwin:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents 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.

Form 10-K for fiscal year ended September 30, 2007

1. Please provide us with an analysis as to whether you are required to file your agreements with your 3 customers that accounted for more than 10% of your consolidated revenues in fiscal year 2007.

Schedule 14A

2. Please confirm in writing that you will comply with the following comments in all future filings. Provide us also with an example of the disclosure you intend to use. Please understand that after our review of your responses, we may raise additional comments.

Compensation Discussion and Analysis

3. You state that for base salary, annual bonus, and long term incentive awards you look at a variety of factors, including both individual performance and company performance and operations. In terms of assessing company performance, we note the financial criteria you list and the operational targets you specify.
 - Specify the actual targets for each of the financial criteria that are taken into account in making compensation decisions. State in each case by what margin or amount you met or failed to meet targets.
 - For the operational performance targets, state in each case by what margin or amount you met or failed to meet targets. Clarify what you mean by the factor calling for “superior results for environmental impact.”
 - Explain how the fact that you had a greater number of safety incidents in 2007 impacted the amount of the discretionary bonus for each officer.
 - Specifically identify all of the performance objectives for each named executive officer and discuss more fully how you determined the actual amount of base salary, annual bonus, and long-term stock incentive awards for each officer by discussing whether, and the extent to which, he or she met such objectives. For example, we note that you state that no named executive officer received the entire multiple of 2 times base salary for fiscal 2007. Explain why this was the case for each officer.

Potential Payments Upon Termination or Change-in-Control

4. Explain why you structured the payment provisions under these agreements in the manner that you did. State whether, and if so, how, the potential payments and

benefits payable under these agreements have influenced decisions regarding other compensation elements for the executives.

Closing Comments

As appropriate, please 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.

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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.

You may contact Donna Levy at (202) 551-3292 or me at (202) 551-3611 with any questions.

Sincerely,

Anne Nguyen Parker
Branch Chief

Cc: Donna Levy