



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

Mail Stop 6010

October 22, 2007

Via Facsimile and U.S. Mail

Mr. Randall Gausman  
Chief Financial Officer  
Rae Systems Inc.  
3775 North First Street  
San Jose, CA 95134

**Re: Rae Systems Inc.  
Form 10-K for the Year Ended December 31, 2006  
File No. 001-31783**

Dear Mr. Gausman:

We have reviewed your filings and have the following comment. We have limited our review of your filing to those items we have addressed in our comments. Where indicated, we think you should revise future filings in response to this comment. 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Mr. Randall Gausman  
Rae Systems Inc.  
October 22, 2007  
Page 2

Form 10-K for the Year Ended December 31, 2006

Consolidated Financial Statements, page F-1

Notes to Consolidated Financial Statements, page F-6

Note 8. Income Taxes, page F-18

1. We note that you present a \$3.9 million deferred income tax asset at December 31, 2006 that appears to primarily relate to your operations in the United States. Giving specific consideration to negative evidence such as cumulative losses in recent years related to your operations in the United States and your losses incurred in the six months ended June 30, 2007, please tell us and revise your future filings to discuss in detail why you believe that it is more likely than not that all of the deferred tax assets will be realized. Please also provide us with a similar analysis of the deferred tax asset at June 30, 2007. Refer to the guidance in paragraphs 17(e) and 20-25 of SFAS 109.

As appropriate, please respond to this comment within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your response to our comment 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 response to our comment.

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 and 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 comment, 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.

Mr. Randall Gausman  
Rae Systems Inc.  
October 22, 2007  
Page 3

You may contact Tara Harkins, Staff Accountant, at (202) 551-3639 or me at (202) 551-3643 if you have questions regarding these comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Kevin Vaughn  
Branch Chief