



DIVISION OF  
CORPORATION FINANCE

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

January 11, 2011

Randall Gausman  
RAE Systems Inc.  
3775 North First Street  
San Jose, CA 95134

**Re: RAE Systems Inc.  
Preliminary Revised Proxy Statement on Schedule 14A  
Filed December 30, 2010  
File No. 001-31783  
Amendment no. 3 to Schedule 13E-3  
Filed December 30, 2010  
File no. 005-58813**

Dear Mr. Gausman:

We have limited our review of your filings to those issues we have addressed in our 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 filings, 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 filings and the information you provide in response to these comments, we may have additional comments.

Litigation Related to the Merger, page 54

1. We note your new disclosure in the first paragraph. Please expand to clarify the "various disclosure claims" made in the amended complaint. Also provide us with a copy of that complaint and any related pleadings.

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 filing persons are in possession of all facts relating to each filing person's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Randall Gausman  
RAE Systems Inc.  
January 11, 2011  
Page 2

In responding to our comments, please provide a written statement from each filing person acknowledging that:

- the filing persons are 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 filings persons 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.

Please contact Jay Mumford at (202) 551-3637 or Geoffrey Kruczek at (202) 551-3641 with any questions.

Sincerely,

Russell Mancuso  
Branch Chief

CC (by facsimile): David K. Michaels, Esq. – Fenwick & West LLP