

Mail Stop 6010

February 1, 2008

Via U.S. Mail and Fax (978) 262-2500

Robert W. Woodbury, Jr.
Chief Financial Officer
Brooks Automation, Inc.
15 Elizabeth Drive
Chelmsford, Massachusetts 01824

**Re: Brooks Automation, Inc.
Form 10-K for the fiscal year ended September 30, 2007
Filed November 29, 2007
File No. 000-25434**

Dear Mr. Woodbury:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your future filings 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 on any other aspects of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

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

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 24

Gross Margin, pages 29 and 32

1. You disclose gross margins excluding inventory step-up charges and amortization. Please delete these non-GAAP financial measures from future filings or explain to us how these disclosures are appropriate under the guidance from Item 10(e) of Regulation S-K.

Quantitative and Qualitative Disclosures about Market Risk, page 37

2. Tell us why you should not make market risk disclosures for your investments. Tell us how you considered the guidance from Item 305 to Regulation S-K. Also refer to the related FAQ which is available on our website.
3. As a related matter, please tell us why you make no quantitative disclosure about your exposure to foreign currencies. Please address how you determined that such disclosure is not required under Item 305 to Regulation S-K.

Financial Statements

Note 2. Summary of Significant Accounting Policies, page 44

Revenue Recognition, page 46

4. We note your disclosure that revenue from repairs is recognized upon shipment, while revenue from upgrades and paid field service is recognized upon acceptance. Tell us why it is appropriate to recognize revenue from repairs at shipment.

Form 10-K/A Amendment No. 1 for the fiscal year ended September 30, 2005

Restatement of Consolidated Financial Statements

5. Please tell us where you have presented restated information required by Item 302 of Regulation S-X for the balance sheets and statements of income in a level of detail consistent with Regulation S-X Article 10-01 (A) (2) and (3) and appropriate portions of 10-01 (b) with columns labeled "restated." Also tell us where you provided revised MD&A for the quarters. Please refer to the sample letter sent in response to inquiries related to filing restated financial statements for

errors in accounting for stock option grants, available at <http://www.sec.gov/divisions/corpfin/guidance/oilgasltr012007.htm>.

6. Please also tell us where you have included disclosure reconciling previously filed quarterly financial information to the restated financial information on a line-by-line basis in accordance with SFAS 154. Please refer to the Division of Corporation Finance sample letter above.
7. Tell us where you provided audited footnote disclosure of restated stock compensation cost for each annual period prior to the most recent three years presented in the filing, as should have been reported under paragraph 45.c.2 of FASB Statement No. 123. The total of the restated stock-based compensation cost should be reconciled to the disclosure of the cumulative adjustment to opening retained earnings. Refer to the sample letter sent in response to inquiries related to filing restated financial statements for errors in accounting for stock option grants available at <http://sec.gov/divisions/corpfin/guidance/oilgasltr012007.htm>.

Form 8-K dated November 9, 2007

8. We note that you present non-GAAP measures in the form of condensed consolidated statements of operations. This format may be confusing to investors as it presents various non-GAAP captions and sub-totals which have not been individually described to investors. It is not clear whether management uses each of these non-GAAP measures; and, they maybe shown here primarily as a result of the presentation format. Under Instruction 2 to Item 2.02 of Form 8-K when furnishing information under this Item you must provide all of the disclosures required by S-K Item 10(e)(1)(i), including a reconciliation to the directly comparable GAAP measure for *each* non-GAAP measure presented with accompanying explanation about why you believe *each* non-GAAP measure provides useful information to investors.
 - To eliminate investor confusion, please remove the pro forma condensed consolidated statements of operations from future earnings releases and instead disclose only those non-GAAP measures used by management that you wish to highlight for investors, with the appropriate reconciliations and qualitative disclosures for each measure presented.
 - Please note that in the event that your Form 8-K is incorporated by reference into a 1933 Act registration statement, we may have additional questions relating to the appropriateness of this information being included in a document filed with, and not just furnished to, the Commission.

9. We note that you refer to non-GAAP information as “pro forma.” The pro forma terminology has very specific meaning in accounting literature, as indicated by Article 11 of Regulation S-X. Please revise future earnings releases to omit the pro forma terminology when referring to non-GAAP information.

As appropriate, please respond to these comments 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 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 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.

Robert W. Woodbury, Jr.
Brooks Automation, Inc.
February 1, 2008
Page 5

You may contact Praveen Kartholy at (202) 551-3778 or me at (202) 551-3605 if you have questions regarding these comments. In this regard, do not hesitate to contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676.

Sincerely,

Gary Todd
Reviewing Accountant