

Mail Stop 6010

July 31, 2007

VIA U.S. MAIL and FACSIMILE

Robert G. Gargus  
Senior Vice President and Chief Financial Officer  
Applied Micro Circuits Corporation  
215 Moffett Park Drive  
Sunnyvale, CA 94089

**RE: Applied Micro Circuits Corporation  
Form 10-K for the fiscal year ended March 31, 2007  
Filed May 30, 2007  
File No. 000-23193**

Dear Mr. Gargus:

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.

Form 10-K for the fiscal year ended March 31, 2007

Consolidated Balance Sheet

1. We note that you present the line item “goodwill and purchased intangibles, net” in your consolidated balance sheet. In future filings, please revise to present goodwill as a separate line item on the balance sheet, as required by paragraph 43 of SFAS 142.

Note 3. Goodwill and Purchased Intangible Assets, page F-17

2. In future filings, please separate goodwill from other intangible assets that are subject to amortization. Disclose the nature of the \$4.1 billion reduction to goodwill included in the table on page F-7.

Note 4. Acquisitions, page F-19

In-Process Research and Development, page F-21

3. In future filings, please disclose the status of your efforts or completion of the R&D projects and the impact of any delays. Additionally, please discuss any material variations between projected results and actual results and how failure to achieve projected results impacted, or will impact your future results and financial condition.

Note 7. Goodwill and Purchased Intangible Asset Impairments, page F-28

4. Regarding the \$131 million goodwill impairment recognized during fiscal year 2006, please tell us and revise future filings to disclose the reporting unit to which the impaired goodwill was related. We see from your disclosure that goodwill is allocated to three reporting units. In addition, please discuss the facts and circumstances that resulted in the impairment, as required by paragraph 47(a) of SFAS 142.

Note 12. Contingencies

5. We reference the disclosure of the outstanding litigation. In future filings, please provide the disclosures required by SFAS 5. Note that even if no accrual is made for a loss contingency because one or both of the conditions in paragraph 8 of SFAS 5 are not met, disclosure of the contingency should indicate the nature of the contingency and shall give an estimate of the possible loss or range of loss or state that such an estimate cannot be made.

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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 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.

You may contact Kristin Lochhead at (202) 551-3664 or me at (202) 551-3676 if you have questions. In this regard, please do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any other questions.

Sincerely,

Brian Cascio  
Accounting Branch Chief