

Mail Stop 6010
April 13, 2006

Via U.S. Mail and Facsimile (858) 450-9885

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

Re: Applied Micro Circuits Corporation
Form 10-K for the fiscal year ended March 31, 2005
Filed June 7, 2005
File No. 000-23193

Dear Mr. Gargus:

We have reviewed your response letter dated March 24, 2006 and your filing and have the following comments. In our comments, we 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 comment 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 March 31, 2005

Item 8. Financial Statements and Supplementary Data, page F-1

Note 1. Summary of Significant Accounting Policies, page F-7

1. We note your response to our previous comment 1. While the term "similar" is not defined in SFAS 131, the Board's intent may be understood from the discussion in the Basis for Conclusions in paragraphs 73 and 74 of SFAS 131, which states, in part, "[t]he Board believes that separate reporting of segment information will not add significantly to an investor's understanding of an enterprise if its operating segments have characteristics so similar that they can be expected to have essentially the same future prospects." As such, it appears that the Board intended a high degree of similarity.

Paragraph 17 of SFAS 131 states that similar long-term average gross margins would be expected if the operating characteristics of two operating segments were similar. Your response indicates that the non-GAAP range of average long-term gross margins are expected to be as follows:

Communications 60% - 65%
Storage 58% - 63%
Embedded Products 55% - 60%

The differences do not appear to indicate that the average long-term

gross margins are highly similar.

In addition, we note that the actual gross profit percentage and expected percentage for each of these groups in 2005 and 2006 is as follows:

Communications	66.8% and 65%	(Actual range 65% and 66.8%)
Storage	56.3% and 55.6%	(Actual range 55.6% - 56.3%)
Embedded Products	55.3% and 54%	(Actual range 54% - 55.3%)

We note that the actual historical and expected gross profits for each segment are not consistent with the expected long-term average range. Consistent with our prior comment, paragraphs 73 and 74 in the Basis for Conclusions in SFAS 131 place an emphasis on the similarity of results and performance and explain that an historical convergence of these performance indicators must have already happened and there must be an expectation that the financial statistics will remain similar in the future.

In addition, we note the following disclosure on page 22 of your December 31, 2005 Form 10-Q, "[t]he standard gross margin of [y]our storage and embedded products are lower on average than the standard gross margin of [y]our communications products on average."

Please discuss why you believe that given this statement and the factors noted above that aggregation is consistent with the objectives and basic principles of SFAS 131. Please refer to paragraph 17.

2. Please refer to prior comment 1. Please tell us why you only used non-GAAP gross profit as the sole measure of gross profit in assessing economic performance. That is, you did not also evaluate GAAP gross profit. Additionally, please tell us your historical and expected long-term average gross margins for the three operating segments on a GAAP basis.

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 that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please file your cover letter on EDGAR. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Praveen Kartholy at (202) 551-3778 or me at (202) 551-3604 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,

Kate Tillan
Assistant Chief

Accountant