



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

February 28, 2012

Via E-mail

Mr. John W. Hohener  
Chief Financial Officer  
Microsemi Corporation  
One Enterprise  
Aliso Viejo, California 92656

RE: **Microsemi Corporation**  
**Form 10-K for the Fiscal Year Ended October 2, 2011**  
**Filed November 23, 2011**  
**File No. 000-08866**

Dear Mr. Hohener:

We have reviewed your filing and have the following 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 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, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended October 2, 2011

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 32

Results of Operations, page 40

1. We note you acquired several companies in fiscal 2011 and did not provide detailed, quantified disclosures herein of the impact of such acquisitions on your

results of operations and changes therein during the periods presented. We also note you did not quantify the impact of volume and/or price changes on your revenues during the periods presented. Accordingly, please provide a more detailed discussion about the reasons for changes in your results of operations as well as other financial statement line items in your future filings. Please refer to Item 303 and the related instructions in Regulations S-K as well as SEC Interpretive Release No. 33-8350.

2. We noted disclosures on page 41 that “in 2009, gross profit percentage was impacted 400 basis points from inventory write-downs related to *product lines that do not meet gross margin targets*, products that are being migrated to newer generations, products that service large capital spending end markets for which demand has declined and inventory at our Scottsdale facility that we announced we are closing”. Please tell us why the fact that a product did not meet a margin target means it needed to be written-down. Revise future filings to clarify when and why your inventory utility declined and why inventory write-downs were necessary.

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 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 responding to our comments, please provide a written 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.

You may contact Dennis Hult, Staff Accountant, at (202) 551-3618 or Jay Webb, Reviewing Accountant, at (202) 551-3603 if you have questions regarding comments on

John W. Hohener  
Microsemi Corporation  
February 28, 2012  
Page 3

the financial statements and related matters. Please contact Alicia Lam at (202) 551-3316 or Geoffrey Kruczek at (202) 551-3641 with any other questions. You may also contact me at (202) 551-3212.

Sincerely,

/s/ Jay Webb “for”

Jeffrey Jaramillo  
Accounting Branch Chief