



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

April 8, 2009

VIA U.S. MAIL AND FAX (636) 474-5158

Kenneth H. Hannah
Chief Financial Officer
MEMC Electronic Materials, Inc.
501 Pearl Drive
St. Peters, Missouri 63376

**Re: MEMC Electronic Materials, Inc.
Form 10-K for the year ended December 31, 2008
Filed February 27, 2009
File No. 001-13828**

Dear Mr. Hannah:

We have reviewed your filing and have the following comment. We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your document in response to this comment. 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 comment 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 year ended December 31, 2008

Critical Accounting Policies and Estimates, page 9

Income Taxes, page 10

1. We noted disclosures on pages 36 and 37 that your unrecognized tax benefits were reduced by \$44 million in fiscal 2008. We also note this reduction does not appear to be immaterial to your financial statements since you indicate your fiscal 2008 income tax expense was reduced by \$29.5 million as a result of the referenced \$44 million reduction. Yet, we did not see any discussion that provided a *detailed* analysis of the reasons for such reduction. Please note that a company should address the questions that arise once the critical accounting estimate or assumption has been identified, by analyzing, to the extent material, such factors as how they arrived at the estimate, *how accurate the estimate/assumption has been in the past, how much the estimate/assumptions has changed in the past and whether the estimate/assumption is reasonably likely to occur and would have a material effect*. Refer to Section V of our Release 33-8350 and consider revising your disclosures related to uncertain tax positions in future filings.

Exhibit 13

Financial Statements, page 16

3. Fair Value Measurements, page 26

2. We note that you measured approximately \$153.3 million of your financial instruments (that are measured at fair value on a recurring basis) at December 31, 2008 based on level 2 inputs. We also note on page 28 that a significant portion of your investment securities at that date consisted of "Fixed Income Funds, Corporate debt, Asset-backed securities and Mortgage-backed securities", all of which are often traded on active markets. Please address the following:
 - Explain to us the factors you considered in concluding that these securities could not be measured using level 1 inputs and why level 2 inputs were more appropriate.
 - Describe to us in detail what type of level 2 inputs (such as, but not limited to, assumptions and methodologies) were used to determine the fair value of these investments and how you validated the methodologies and assumptions used.

In order to help the readers of your financial statements, please revise your disclosure in future filings to address the issues outlined in our comment.

5. Investments, page 29

3. We note disclosures that your corporate debt securities (with a value) of \$76.6 million have been in continuous loss positions for over twelve months. Please provide all the applicable disclosures described in paragraph 17 of FSP FAS 115-1/124-1 in future filings. For example, the disclosures you presented herein were not in a tabular form and we did not see the disclosures required by paragraph 17 (a)(2). Finally, please also provide us with a draft of the requested disclosures for your investments as of December 31, 2007 and 2008.

As appropriate, please amend your filing and respond to this comment within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comment.

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 and 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 filings;
- 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.

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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 Andri Boerman, Staff Accountant, at (202) 551-3645 or me at (202) 551-3603 if you have any questions regarding these comments. In this regard, do not hesitate to contact Angela Crane, Branch Chief, at (202) 551-3554.

Sincerely,

Jay Webb
Reviewing Accountant