

Mail Stop 6010

July 31, 2008

Nabeel Gareeb
President and Chief Executive Officer
MEMC Electronic Materials, Inc.
501 Pearl Drive (City of O'Fallon)
St. Peters, Missouri 63376

**Re: MEMC Electronic Materials, Inc.
Form 10-K for Fiscal Year Ended December 31, 2007
Filed February 29, 2008
Form 10-Q for Fiscal Quarter Ended March 31, 2008
Filed May 8, 2008
File No. 1-13828**

Dear Mr. Gareeb:

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 fiscal year ended December 31, 2007

Item 7. Management's Discussion and Analysis..., page 18

Company Overview, page 11 of 2007 Annual Report

1. We note that your discussion and analysis repeats much of the information contained in the "Business" section of your annual report on Form 10-K. Please revise your

disclosure in your future filings, as applicable, to add an overview that contains a balanced, executive-level discussion that identifies the most important themes or other significant matters with which management is concerned primarily in evaluating the company's financial condition and operating results. Discuss material business opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which the company's executives are most focused, and the actions they are taking in response to them. For instance, we note that the sale of polysilicon and other "intermediate products" accounted for approximately 22% of your net sales in 2007. In future filings, please provide an executive-level discussion of the business, industry and technological trends that are driving the sales of your products, including "intermediate products," and that are affecting your operating results. For further guidance on the content and purpose of the "Overview," see Interpretive Release No. 33-8350 on our website at <http://www.sec.gov/rules/interp/33-8350.htm>.

Results of Operations, page 11 of 2007 Annual Report

2. In future filings, to the extent practicable, separately quantify the various components of your line item results to give readers a better understanding of your results. For instance, how much of the 25% increase in net sales in 2007 was attributable to volume increases, and how much was attributable to price increases in existing wafer products or "intermediate products" such as polysilicon? Also, please clarify how increased sales and pricing of intermediate products have affected your overall gross margins and describe the known supply and demand trends that affect your business. Include risk factor disclosure as appropriate.
3. Please revise future filings to identify the customer whose common stock you hold a warrant to purchase that was valued at \$306.3 million at the end of the fiscal year.

Item 11. Executive Compensation, page 19

4. The Compensation Discussion and Analysis in your future filings should be sufficiently precise to capture material differences in compensation policies with respect to individual named executive officers. Refer to Section II.B.1 of Commission Release No. 33-8732A. In this regard, we note the significant disparity in Mr. Gareeb's compensation in the form of stock option awards. Please expand your disclosure in future filings to include a more detailed discussion and analysis of how and why the compensation of your highest-paid named executive officer differs from that of the other named executive officers. If policies or decisions applicable to a named executive officer are materially different than those applicable to the other named executive officers, this should be discussed on an individualized basis. Please also expand the disclosure in your future filings to

discuss and analyze how the Compensation Committee determined the amount of options to award your chief executive officer under the employment agreement.

5. We refer to your disclosure under the captions “Short Term Incentive Awards” and “Long Term Incentive Awards” on pages 14 and 15 of the proxy statement that you have incorporated by reference into your Form 10-K. In future filings, please identify the performance objectives used to award short-term incentive awards and the performance based restricted stock awards to the named executive officers, including your chief executive officer. Similarly, if applicable, explain the basis for the Compensation Committee’s decision to permit the named executive officers to retain performance-based grants of restricted stock units due to the achievement of specific objectives.
6. It appears that your annual short term incentive awards should have been disclosed, pursuant to Item 402(d)(2)(iii) of Regulation S-K, in your "Grants of Plan Based Awards" table on page 19 of the proxy statement that you have incorporated by reference into your Form 10-K. Please provide such disclosure in your future filings, as applicable, or provide us with your analysis as to why such information should not have been included in that table.

Form 10-Q for period ended March 31, 2008

Item 1. Financial Statements, page 2

Note 2. Adoption of New Accounting Pronouncements, page 6

7. We note that approximately 67% of your available for sale securities were measured based on level 2 inputs. Please tell us more about the inputs used, including how you obtain these inputs, what they represent and how you are able to corroborate these prices.
8. In this regard, we note that approximately 24% of your available for sale securities were measured using level 3 inputs. We also note your disclosure that “unobservable inputs are inputs that reflect MEMC’s assumptions about the assumptions market participants would use in pricing the asset or liability based on the best information available in the circumstances.” Please tell us and revise future filings to discuss the significant assumptions utilized by management in determining the fair value of investments with level 3 inputs, as well as the valuation techniques used. In addition, tell us how you how you obtained these inputs, what these amounts represent, and how you determine they were appropriate.

9. We also note your discussion that “valuations of your available for sale investments involved making assumptions about future cash flows based on interest rate formulas” and you “used estimates of observable market data including yields or spreads of trading instruments...” Please tell us which level input you are referring to in your discussion and revise your discussion in future filings to specifically address your valuations related to your level 1, 2 and 3 inputs separately to enhance the understanding of the investor. Please also tell us about the significant assumptions that you made, explain the interest rate formulas you refer to and tell us about the estimates of observable market data. Please also revise your Critical Accounting Policies in future filings to discuss significant assumptions and estimates made by management in determining fair value.

Item. 2. Management’s Discussion and Analysis, page 13

Liquidity and Capital Resources, page 15

10. We note that you hold approximately \$280 million in action rate securities, asset-backed securities and mortgage-backed securities at December 31, 2007. We also note that you reclassified some of these securities as long-term investments since the time to reach the original carrying value was assumed to be greater than 12 months. Please tell us how you determined the fair value of these securities. Also, explain why some, but not all of the securities were transferred to non-current assets and your ability to sell the current securities within the next twelve months. Please clarify whether you have the intent and the ability to hold these securities until maturity. Refer to SFAS 115, FSP FAS 115-1, SAB Topic 5M, or other authoritative accounting literature which supports your analysis.
11. We note from footnote 6 to your financial statements that a significant portion of your marketable securities were held in asset-backed securities, mortgage-backed securities and auction rate securities. In your future filings, as applicable, please quantify the amounts held in mortgage-backed and asset-backed securities, and clearly discuss the nature of the material aspects of those securities as necessary to provide your investors with a clearer understanding of your balance sheet items. For example, as appropriate, identify the nature of the asset-backed, mortgage-backed and auction-rate securities that you hold, disclose the credit ratings of those securities, discuss the factors that may affect the value or liquidity of those securities and disclose how the interest rates on those investments are determined. Also, if those securities are reasonably likely to affect your financial condition in a material way, please expand your discussion and analysis in applicable future filings to provide your investors with information necessary for a clear understanding of the trend or uncertainty. Refer to Item 303(a) of Regulation S-K. Also add any appropriate disclosure required by Item 305 of Regulation S-K.

12. In your future filings, as applicable, revise the "Critical Accounting Policies" section of "Management's Discussion and Analysis" to discuss the material accounting estimates and assumptions you make in valuing the asset-backed, mortgage-backed and auction rate securities that you hold. Describe the process by which you determine the value of those securities, the levels of judgment involved and the susceptibility of the resulting value to changes in your estimates and assumptions.

* * * * *

Please respond to our comments within 10 business days or tell us when you will provide us with a response. Please understand that we may have additional comments after reviewing your response to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings 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 filings or in response to our comments on your filings.

You may contact Julie Sherman, Staff Accountant, at (202) 551-33640 or Angela Crane, Accounting Branch Chief, at (202) 551-3554 if you have questions regarding comments on the financial statements and related matters. Please contact Mary Beth

Nabeel Gareeb
MEMC Electronic Materials, Inc.
July 31, 2008
Page 6

Breslin at (202) 551-3625 or me at (202) 551-3635 if you have questions on any other comments.

Sincerely,

Tim Buchmiller
Senior Attorney