

VIA EDGAR (FILED AS CORRESPONDENCE) AND FACSIMILE

March 12, 2008

Mr. Gary Todd
Accountant
United States Securities & Exchange Commission
Division of Corporation Finance
Washington, D. C. 20549-0306

Re: Applied Materials, Inc.
Form 10-K for the fiscal year ended October 28, 2007
Filed December 14, 2007
File No. 000-06920
10-K Comment Letter dated February 22, 2008

Dear Mr. Todd:

Set forth below are the responses of Applied Materials, Inc. ("Applied" or the "Company") to the comments of the staff of the Securities and Exchange Commission set forth in its letter dated February 22, 2008 to me regarding Applied's Form 10-K filed December 14, 2007 (the "2007 Form 10-K"). For your convenience, the staff's comments are reprinted in bold.

Form 10-K for the Fiscal Year Ended October 28, 2007

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 22

Financial Condition: Liquidity and Capital Resources, page 32

- 1. It appears from your table on page 56, and from your related disclosure, that a significant portion of your cash equivalents and investments include "mortgage- and asset-backed securities." We also note your disclosure on page 34 that "Applied expects to receive a pro rata distribution of the underlying securities in the [enhanced cash fund]." In future filings, please clearly discuss the nature of the material components of your investments so as to provide your investors with information necessary for a clear understanding of your balance sheet items. For example, as appropriate, identify the amounts and nature of any mortgage- and asset-backed securities you hold, indicate what factors may affect the value of those securities, and disclose any material risks. Also, if the value of your investments are reasonably likely to affect your financial condition in any 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 in Item 305 of Regulation S-K.**

Applied's investment portfolio consists principally of investment grade municipal bonds, institutional money market mutual funds (consistent with Rule 2a-7), U.S. Treasury and agency securities, corporate bonds, and mortgage-backed and asset-backed securities. In response to your comment, at October 28, 2007, Applied's investment portfolio included mortgage-backed and asset-backed securities totaling \$340 million in value, which constituted approximately 9% of Applied's total cash, cash equivalents, and

investments. All of these securities were rated AAA by at least one of the nationally recognized credit rating agencies. Of this amount, \$200 million was invested in mortgage-backed securities, more than half of which were issued by a U.S. government-sponsored entity such as Federal National Mortgage Association, the Government National Mortgage Association, or the Federal Home Loan Mortgage Association. Approximately \$6 million of these investments (or 0.2% of total cash, cash equivalents, and investments) are collateralized by what are typically considered sub-prime mortgages. In addition to a AAA rating, at October 28, 2007, these mortgage-backed securities had one or more layers of credit enhancement, such as senior priority to other related debt, over-collateralization, cash reserves and bond insurance. The remaining asset-backed portion of Applied's portfolio consisted of \$141 million invested in securities predominantly collateralized by consumer credit card debt, auto loans, and equipment loans that had structural credit enhancement similar to that described in the preceding sentence. The combination of all of these factors reduces market risk for these investments. Applied has never experienced a default in any mortgage-backed or asset-backed investment. At October 28, 2007, Applied's net unrealized loss related to mortgage-backed and asset-backed investments was \$263,000. Accordingly, Applied believes that its investments at October 28, 2007 were not reasonably likely to affect its financial condition in any material way, given the composition, quality and market risk of its investment portfolio.

As disclosed in the 2007 Form 10-K, on December 6, 2007, in connection with its enhanced cash fund (the Fund), Applied received notice from the Fund manager that redemptions were temporarily suspended, although redemptions could be fulfilled through a pro rata distribution of the underlying securities in the Fund. Applied also disclosed that it expected to receive a pro rata distribution of the underlying securities in the Fund. On December 17, 2007, Applied received a pro rata distribution of securities and cash from the Fund in the amounts of \$72 million and \$13 million, respectively, which resulted in recognition of a loss of approximately \$900,000. The securities distributed are disclosed as part of Applied's cash, cash equivalents and investments, and are managed in accordance with Applied's standard investment policies and practices.

Management is aware that as a result of recent adverse conditions in the financial markets, the following types of financial instruments may present risks arising from liquidity and/or credit concerns: structured investment vehicles, auction rate securities, sub-prime mortgage-backed securities, and collateralized debt obligations. For the reasons set forth above, Applied believes that liquidity or credit concerns within the portfolio related to these securities were not material to Applied for its first fiscal quarter ended January 27, 2008. However, in order to provide additional information to our investors, Applied expanded its disclosure in its Form 10-Q filed on March 3, 2008, by including the following new paragraph in Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") on page 25:

Applied's investment portfolio consists principally of investment grade municipal bonds, money market mutual funds, U.S. Treasury and agency securities, corporate bonds, and mortgage-backed and asset-backed securities. Applied regularly monitors the credit risk in its investment portfolio and takes appropriate measures to manage such risks prudently in accordance with its investment policies. As a result of recent adverse conditions in the financial markets, the following types of financial instruments may present risks arising from liquidity and/or credit concerns: structured investment vehicles, auction rate securities, sub-prime mortgage-backed securities, and collateralized debt obligations. At January 27, 2008, Applied's holdings in these categories of investments totaled \$45 million, or 1.3% of total cash, cash equivalents and investments, which Applied does not consider to be material. In the event that these categories of investments that are experiencing credit concerns become illiquid, Applied does not believe that this will materially affect the Company's liquidity or results of operations. In the first quarter of fiscal 2008, as part of its regular investment review process, Applied recorded an insignificant impairment charge associated with its investment portfolio. While Applied cannot predict future market conditions or market liquidity, Applied believes that its investment policies provide an appropriate means to manage the risks in its investment portfolio.

In response to the staff's comment, in future filings, Applied will expand its disclosure to include a discussion of the material components of the Company's investments that management believes are reasonably likely to materially affect the Company's financial condition and liquidity, including a discussion of material known trends in MD&A.

Critical Accounting Policies and Estimates, page 35

- 2. In light of the significance of your investment portfolio, please tell us why you should not present critical accounting policy disclosure for investments. In that regard, any disclosure should address the material accounting estimates and assumptions you make in valuing investment securities, including description of 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 estimates and assumptions.**

Applied considers a critical accounting policy to be a policy that is both material to the presentation of Applied's consolidated financial statements and that requires management to make difficult, subjective or complex judgments that could have a material effect on Applied's financial condition or results of operations. Specifically, these policies have the following attributes: (1) Applied is required to make assumptions about matters that are highly uncertain at the time of the estimate; and (2) different estimates Applied could reasonably have used, or changes in the estimate that are reasonably likely to occur, would have a material effect on Applied's financial condition or results of operations. Applied does not believe that the valuation of investment securities constitutes a critical accounting policy since management is not required to make difficult, subjective or complex judgments relating to the valuation of its investment securities, that could have a material effect on the Company's financial condition or results of operations, as explained further below.

Applied follows standard industry practice of utilizing a custodial financial institution to hold its fixed income securities, which are valued by independent third party pricing services that identify an observed price, if available, or apply valuation methodologies to determine the securities' fair market value. The custodial financial institution provides Applied with valuation reports based on these valuations. Applied reviews the valuation reports for reasonableness and investigates any security valuation that differs from its expectations given the nature of the security and current market conditions. If the custodian is unable to establish a reasonable estimate of the fair value of a security, Applied obtains estimates of fair value from alternate third party securities firms that use similar valuation processes as described above. In February 2008, in accordance with the above-described process, Applied obtained estimates from alternate third parties of the fair value of certain fixed income securities totaling \$16 million (or 0.5% of cash, cash equivalents and investments at January 27, 2008). Applied believes that this process is robust and reliable, has functioned well and has not required management to make difficult, complex or subjective judgments.

Applied's management also is not required to make subjective judgments concerning the Company's publicly traded equity securities, as they are valued based on quoted market prices at the end of the period. Privately held equity securities, which in the aggregate are not material to Applied, are carried at cost and periodically assessed for impairment.

Financial Statements, page 45

Note 2, Financial Instruments, page 55

3. In future filings please describe the principal components of “other debt securities.”

In future filings, Applied will expand its investment disclosures to provide a description of the principal components of “other debt securities.”

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As required by the Commission and in connection with responding to the staff’s comments with respect to the 2007 Form 10-K, the Company acknowledges that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosures in response to staff comments in the filings reviewed by the staff 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.

Applied understands the importance of, and is committed to complying with, all applicable SEC rules and regulations. Therefore, if you require additional information or clarification with respect to Applied’s responses, or wish to discuss the responses further, please contact me at (408) 748-5338 or Ms. Yvonne Weatherford, Corporate Vice President and Corporate Controller, at (408) 235-6030.

Sincerely,

/s/ George S. Davis

George S. Davis
Senior Vice President and Chief Financial Officer