UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): April 1, 2005

Applied Materials, Inc. (Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation)

0-6920 (Commission File Number)

94-1655526 (IRS Employer Identification No.)

3050 Bowers Avenue P.O. Box 58039 Santa Clara, CA (Address of principal executive offices)

95052-8039 (Zip Code)

Registrant's telephone number, including area code: (408) 727-5555

N/A

(Former name or former address, if changed since last report.)

ck the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following isions:
Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 5.04. Temporary Suspension of Trading under Registrant's Employee Benefit Plans.

On March 18, 2005, Applied Materials, Inc. ("Applied") notified participants in the Applied Materials, Inc. Employee Savings and Retirement Plan (the "401(k) Plan") that a blackout period under the 401(k) Plan would be in effect beginning as of the close of the market on April 18, 2005, and ending during the week of April 24, 2005 (the "401(k) blackout period").

The notice to 401(k) Plan participants provided that the Applied Materials, Inc. Common Stock Fund (the "Applied Stock Fund") under the 401(k) Plan would be converting to real-time trading for purchases and sales and that the reason for the 401(k) blackout period was to allow sufficient time for the 401(k) Plan's trustee/recordkeeper to make this conversion to real-time trading. 401(k) Plan participants were advised to contact Fidelity Investments at 1-800-835-5098 to obtain the specific ending date of the 401(k) blackout period. During the 401(k) blackout period, participants will be unable to exchange their 401(k) Plan account balances into or out of the Applied Stock Fund, change their future contributions directed to the Applied Stock Fund, or request new loans or distributions from the Applied Stock Fund.

In addition to the notice to 401(k) Plan participants, on April 1, 2005, Applied gave written notice to all members of its Board of Directors and all executive officers pursuant to Section 306(a)(1) of the Sarbanes-Oxley Act of 2002 and SEC Regulation BTR promulgated thereunder. The notice advised that Applied's directors and executive officers are subject to special trading restrictions that, in general, prevent them from selling, purchasing or otherwise acquiring any shares of Applied common stock during the 401(k) blackout period, subject to certain exceptions. A copy of this notice is attached hereto as Exhibit 99.1.

During the 401(k) blackout period and for a period of two years after the ending date of the 401(k) blackout period, security holders or other interested persons may obtain, without charge, information about the actual beginning and ending dates of the 401(k) blackout period by contacting Charmaine Mesina, Managing Director, Corporate Legal Services, in writing, at Applied Materials, Inc., 3050 Bowers Avenue, P.O. Box 58039, M/S 2062, Santa Clara, CA 95052-8039.

Item 9.01. Financial Statements and Exhibits.

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Exhibit No. Description

99.1 Important Notice of Special Trading Restriction During 401(k) Blackout Period.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Applied Materials, Inc. (Registrant)

By: /s/ Joseph J. Sweeney

Joseph J. Sweeney Group Vice President Legal Affairs and Intellectual Property and Corporate Secretary

Date: April 1, 2005

EXHIBIT INDEX

Exhibit No. Description

99.1 Important Notice of Special Trading Restriction During 401(k) Blackout Period.

To: All Members of the Board of Directors and Executive Officers of Applied Materials, Inc.

From: Joe Sweeney, Charmaine Mesina

Date: April 1, 2005

Re: Important Notice of Special Trading Restrictions During 401(k) Blackout Period

Please be advised that you will be subject to special trading restrictions beginning at the close of the market on Monday, April 18, 2005, and ending during the week of April 24, 2005. During this period (the "401(k) blackout period"), a blackout will be imposed affecting participants in the Applied Materials' Employee Savings and Retirement Plan (the "401(k) Plan"), in order to enable the Applied Materials Common Stock Fund (the "Applied Stock Fund") under the 401(k) Plan to be converted to real-time trading for purchases and sales. During the 401(k) blackout period, 401(k) Plan participants will be unable to transfer their account balances into or out of the Applied Stock Fund, change their future contributions directed to the Applied Stock Fund, or request new loans or distributions from the Applied Stock Fund. As a result, in general, you may not purchase, sell or otherwise acquire any shares of Applied Materials common stock during the 401(k) blackout period, as specified under SEC Regulation BTR adopted pursuant to Section 306(a) of the Sarbanes-Oxley Act. The rule applies to board members and executive officers of public companies and was designed to eliminate the inequities that may result when participants in such companies' pension plans are temporarily prevented from engaging in equity securities transactions through their plan accounts.

The specific ending date of the 401(k) blackout period will be determined by Fidelity Investments ("Fidelity") and may be confirmed by contacting Fidelity at 1-800-835-5098. The 401(k) blackout period will fall within the Q2'05 regular quarterly blackout, which begins on April 11, 2005 and ends on May 20, 2005, following Applied Materials' earnings release.

Although this trading restriction is subject to certain exceptions, given the complexity of these rules and the short period of time involved, you should avoid any change in your beneficial ownership of Applied Materials stock during the 401(k) blackout period, including purchases and sales of Applied shares held outside of the 401(k) Plan and exercises of stock options.

If you have any questions concerning this notice or the 401(k) blackout period, please contact Charmaine Mesina, Managing Director, Corporate Legal Services, in writing at Applied Materials, Inc., 3050 Bowers Avenue, P.O. Box 58039, M/S 2062, Santa Clara, CA 95052-8039, by telephone at (408) 563-2153, or by email at Charmaine Mesina@amat.com.