
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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): May 10, 2006

KLA-Tencor Corporation

(Exact name of registrant as specified in its charter)

000-09992

(Commission File Number)

Delaware

(State or other jurisdiction
of incorporation)

04-2564110

(I.R.S. Employer Identification No.)

160 Rio Robles
San Jose, California
95134

(Address of principal executive offices, with zip code)

(408) 875-3000

(Registrant's telephone number, including area code)

N/A

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

Check 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 provisions:

- 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))
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Item 8.01 Other Events

As previously disclosed in the preliminary merger proxy filed by KLA-Tencor Corporation and ADE Corporation, both KLA-Tencor and ADE filed Notification and Report Forms with the Federal Trade Commission and the Antitrust Division of the Department of Justice, or the Antitrust Division, pursuant to the Hart-Scott-Rodino Antitrust Improvement Act of 1976, or the HSR Act, by March 8, 2006. As a result, the waiting period under the HSR Act with respect to the merger between KLA-Tencor and ADE was scheduled to expire on April 7, 2006. Following discussion with the Antitrust Division staff, however, KLA-Tencor voluntarily withdrew its Notification and Report Form and then re-filed the form on April 11, 2006. The effect of this re-filing was to extend the waiting period under the HSR Act to May 11, 2006. Today, the Antitrust Division staff informed KLA-Tencor that Antitrust Division would not issue a second request extending the HSR Act waiting period and granted early termination of the HSR waiting period effective today.

SIGNATURES

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.

KLA-TENCOR CORPORATION

Date: May 10, 2006

By: /s/ John H. Kispert
John H. Kispert
President and Chief Operating Officer