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): 10/09/2010

KLA-TENCOR CORPORATION

(Exact name of registrant as specified in its charter)

Commission File Number: 000-09992

Delaware

(State or other jurisdiction of incorporation)

04-2564110 (IRS Employer Identification No.)

One Technology Drive, Milpitas, California 95035 (Address of principal executive offices, including 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))

Item 8.01. Other Events

On October 9, 2010, the Board of Directors of KLA-Tencor Corporation (the "Company") affirmed its commitment to pay-for-performance by announcing its intention to do the following:

- Consistent with the Company's fiscal year 2011 executive compensation program, at least 50% of the equity awards (in terms of number of shares) granted to the Company's Chief Executive Officer in any particular fiscal year will be performance-based equity awards that are earned or paid out based on the achievement of performance targets; and

- Consistent with the Company's current practice, the performance criteria measured and the difficulty of the achievement will be disclosed in the proxy statement for each annual meeting of stockholders, each in accordance with applicable regulations of the Securities and Exchange Commission ("SEC").

Important Information: In connection with the solicitation of proxies, the Company filed with the SEC and furnished over the Internet in accordance with SEC rules a definitive proxy statement dated September 23, 2010 (the "Proxy Statement"). The Proxy Statement contains important information about the Company and the 2010 Annual Meeting of Stockholders. The Company's stockholders are urged to read the Proxy Statement carefully. The Proxy Statement is available for free at the SEC's website at www.sec.gov, at the Company's website at www.kla-tencor.com/annualmeeting or through the other methods described in the notice of availability of proxy materials, proxy card or voting instruction card sent to the Company's stockholders. The contents of the websites referenced above are not deemed to be incorporated by reference into the Proxy Statement or this Current Report on Form 8-K.

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: October 12, 2010

By: /s/ Brian M. Martin

Brian M. Martin Senior Vice President and General Counsel