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): 09/13/2008

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:

| IJ | Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425) |
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| [] | 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)) |
| 1.1 | Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c)) |

Item 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers

(b) On September 13, 2008, Lida Urbanek advised KLA-Tencor Corporation (the "Company") of her decision not to stand for re-election as a member of the Company's Board of Directors (the "Board") at the Company's annual meeting of stockholders scheduled to be held on November 13, 2008 (the "Annual Meeting"). Ms. Urbanek has indicated her intention to continue to serve as a director until the date of the Annual Meeting. Ms. Urbanek's decision not to stand for re-election was not a result of a disagreement with management regarding the Company's operations, policies, practices or otherwise. Ms. Urbanek has served as a director of the Company since April 1997, and previously was a member of the Board of Directors of Tencor Instruments from August 1991 until April 1997 (when it was merged into the Company).

In accordance with a policy adopted in February 2008 by the Compensation Committee of the Board, because Ms. Urbanek is resigning from the Board as a director in good standing and with at least two full terms of Board service, Ms. Urbanek will be automatically entitled upon her resignation from the Board (scheduled to be effective November 13, 2008, the date of the Annual Meeting) to (i) the elimination of the delayed delivery feature of her vested but undelivered restricted stock units, so that the shares of common stock underlying such units become immediately deliverable upon the effective date of her resignation, and (ii) the acceleration of the vesting of her unvested restricted stock units to provide Ms. Urbanek with prorated vesting, calculated on a quarterly basis from the applicable date of grant, for her partial year of service through the effective date of her resignation.

In its acceptance of Ms. Urbanek's decision not to stand for re-election, the Board expressed its gratitude and appreciation to Ms. Urbanek for her 17 years of service to the Company.

Signature(s)

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: September 18, 2008 By: /s/ Brian M. Martin

Brian M. Martin Senior Vice President and General Counsel