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): 11/03/2010

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

(e) In its meeting held on November 3, 2010, the Compensation Committee of the Board of Directors of KLA-Tencor Corporation (the "Company") approved the Company's 2010 Executive Severance Plan (the "2010 Plan"). The 2010 Plan is intended to exist in parallel with the Company's existing Executive Severance Plan (the "Existing Plan"), which will remain in full force and effect for existing participants under the Existing Plan (except as otherwise determined by the Compensation Committee or the Board of Directors, as applicable) until terminated in accordance with its terms. No participant under the 2010 Plan is eligible to participate under the Existing Plan, and no participant under the Existing Plan is eligible to simultaneously participate under the 2010 Plan.

Like the Existing Plan, the 2010 Plan provides certain compensation and benefits in the event that a participant's employment with the Company terminates under certain defined circumstances. The terms of and benefits payable under the 2010 Plan are in many ways substantially similar to those set forth in the Existing Plan. However, unlike the Existing Plan, the 2010 Plan does not contain tax gross-up provisions related to excise taxes that may be imposed by Section 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), as the result of a participant receiving a payment that would constitute a "parachute payment" within the meaning of Code Section 280G upon or in connection with a change of control of the Company. Instead, if a payment under the 2010 Plan would constitute such a "parachute payment" and would be subject to such excise tax, then such payment will be reduced to either (a) the largest portion of the payment that would result in no portion of the payment being subject to the excise taxes, income taxes, and the excise tax (all computed at the highest applicable marginal rate), results in the participant's receipt, on an after-tax basis, of the greater amount of the payment notwithstanding that all or some portion of the payment may be subject to the excise tax.

For a participant who is granted severance rights under the 2010 Plan in connection with a separation from service that is unrelated to a change of control of the Company, such participant will receive in connection with such a separation from service: (i) salary continuation payments for 18 months; (ii) pro-rated vesting of all of his or her outstanding equity awards through the date of his or her separation from service (rounded up to the next whole month and disregarding any "cliff-vesting" provisions applicable to the award); and (iii) the extension of the post-termination exercise period of each stock option or stock appreciation right granted after January 1, 2006 so that the option or right will remain exercisable for twelve months following the date of separation from service, but in no event beyond the original term of the award. The calculation in clause (ii) of this paragraph with respect to any performance-based equity awards for which the achievement of the applicable performance criteria has not yet been determined as of the participant's termination date will be delayed until the extent of the achievement of those criteria (and thus the maximum number of shares issuable under the applicable award) has been finally determined.

For a participant who is granted severance rights under the 2010 Plan in connection with a separation from service upon or in connection with a change of control of the Company, such participant will receive in connection with such a separation from service (if it occurs within one year following a change of control): (i) salary continuation payments for 18 months; (ii) a pro-rated annual incentive payment for the fiscal year of his or her separation from service (calculated based on the participant's annual incentive bonus for the then-most recently completed fiscal year and the proportion of the then-current fiscal year served through the date of separation from service); (iii) 100% vesting acceleration of all of his or her outstanding equity awards; and (iv) the extension of the post-termination exercise period of each stock option or stock appreciation right granted after January 1, 2006 so that the option or right will remain exercisable for twelve months following the date of separation from service, but in no event beyond the original term of the axed. The calculations in clause (iii) of this paragraph with respect to any performance-based equity awards for which the achievement of the applicable performance criteria has not yet been determined as of the participant's termination date will be delayed until the extent of the achievement of those criteria (and thus the maximum amounts that would have been issuable with respect to such awards) has been finally determined.

In exchange for receiving severance benefits under the 2010 Plan, the participant will be subject to a non-compete covenant and non-solicitation restrictions for the period of time co-terminous with the period for which he or she will receive continued compensation and benefits under the 2010 Plan. The 2010 Plan also contains a mitigation provision in which the benefits payable are subject to reduction to the extent the participant earns post-termination compensation from sources other than the Company.

In connection with the adoption of the 2010 Plan, the Compensation Committee also approved a modification to the severance benefits payable to Virendra A. Kirloskar, the Company's Senior Vice President and Chief Accounting Officer and a named executive officer of the Company. Mr. Kirloskar, who previously was a participant under the Existing Plan with severance rights only in connection with a separation from service unrelated to a change of control of the Company, was removed from the Existing Plan and added as a participant under the 2010 Plan. Under the 2010 Plan, Mr. Kirloskar has been granted severance rights under the 2010 Plan in connection with a change of control of the Company, as described two paragraphs above.

The foregoing description of the 2010 Plan is qualified in its entirety by reference to the 2010 Plan, which will be attached as an exhibit to the Company's Quarterly Report on Form 10-Q for the period ending December 31, 2010, which the Company expects to file with the Securities and Exchange Commission on or prior to February 9, 2011.

Item 5.07. Submission of Matters to a Vote of Security Holders

The Company's Annual Meeting of Stockholders was held on November 3, 2010. Of the 166,770,498 shares of the Company's common stock outstanding as of September 14, 2010 (the record date), 153,152,977 shares, or 91.83%, were present or represented by proxy at the meeting. Two proposals were considered at the meeting.

Proposal One. The stockholders elected the Company's four Class III nominees to its Board of Directors to each serve for a three-year term, each until his or her successor is duly elected. The table below presents the results of the election.

For	Withheld	Broker Non-Votes
126,739,398	11,245,706	15,167,873
136,696,558	1,288,546	15,167,873
135,156,209	2,828,895	15,167,873
136,691,962	1,293,142	15,167,873
	126,739,398 136,696,558 135,156,209	126,739,39811,245,706136,696,5581,288,546135,156,2092,828,895

The Company's Class I directors (Robert M. Calderoni, John T. Dickson and Kevin J. Kennedy) and Class II directors (Robert P. Akins, Robert T. Bond, Kiran M. Patel and David C. Wang) were not subject to reelection at the annual meeting, and their respective terms of office as members of the Board of Directors continued after the meeting.

Consistent with the powers granted by Article II, Section 1 of the Company's Bylaws, on November 3, 2010, the Board adopted resolutions that increased, effective immediately, the number of directors on the Board from ten (10) to eleven (11) to accommodate the addition of Ms. Higashi, who was not an incumbent director prior to her election at the Annual Meeting of Stockholders.

Proposal Two. The stockholders ratified the appointment of PricewaterhouseCoopers LLP as the Company's independent registered public accounting firm for the fiscal year ending June 30, 2011. This proposal received 152,056,169 votes in favor, 906,597 votes against and 190,211 abstentions.

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: November 05, 2010

By: /s/ Brian M. Martin

Brian M. Martin Senior Vice President and General Counsel