
**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): September 19, 2006

KLA-TENCOR CORPORATION

(Exact name of registrant specified in its charter)

Delaware	000-09992	04-2564110
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)
160 Rio Robles, San Jose, California		95134
(Address of principal executive offices)		(Zip Code)

Registrant's telephone, including area code: (408) 875-3000

(Former name and 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 *see* General Instruction A.2. below):

- 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 1.01: Entry into a Material Definitive Agreement

On September 19, 2006, the Compensation Committee of the Board of Directors of KLA-Tencor Corporation (the "Company") approved awards of restricted stock units covering a total of 2,530,689 shares of the Company's common stock to employees of the Company, including the executive officers. The restricted stock units were awarded under the Company's 2004 Equity Incentive Plan (the "Plan"), and each unit will entitle the recipient to one share of common stock when the applicable vesting requirements for that unit are satisfied. However, for each share actually issued under the awarded units, the share reserve under the Plan will be reduced by 1.8 shares, as provided under the terms of such Plan.

The executive officers who were awarded restricted stock units and the maximum number of units awarded to each such officer are as follows:

<u>Name</u>	<u>Maximum Number of Restricted Stock Units</u>
Richard P. Wallace, Chief Executive Officer	62,500
John H. Kispert, President and Chief Operating Officer	62,500
Jeffrey L. Hall, Chief Financial Officer	18,750

The restricted stock units awarded to the executive officers are subject to both performance vesting tied to the Company's operating income for the 2007 fiscal year and service vesting over a four-year period measured from the award date. The actual number of shares to which each executive officer will become entitled under his or her award will be determined as follows:

(i) As soon as practicable following the completion of the Company's audited financial statements for the 2007 fiscal year, the Compensation Committee will determine the level at which the performance goal for that year has been attained and on the basis of that assessment determine the specific number of restricted stock units each executive officer will have the potential to earn based on his or her continued service. Such number may range from 0 restricted stock units (if less than threshold attainment of the performance goal is attained) to the maximum number awarded to such individual (if attainment is at or above the maximum specified goal).

(ii) The executive officer will vest in 50% of the number of restricted stock units determined under subparagraph (i) upon his or her completion of two years of service with the Company measured from the award date and will vest in the remaining 50% upon his or her completion of an additional two years of service.

A copy of both the form Restricted Stock Unit Award Notification and the form Restricted Stock Unit Agreement that will be used to evidence the awards made to the executive officers are filed as exhibits to this Form 8-K.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibits are filed herewith:

Exhibit Number	Description
10.19	Form Restricted Stock Unit Award Notification.*
10.20	Form Restricted Stock Unit Agreement.*

* Denotes a management contract, plan or arrangement.

SIGNATURES

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

KLA-TENCOR CORPORATION

Date: September 20, 2006

By: /s/ Jeffrey L. Hall
Name: Jeffrey L. Hall
Title: Chief Financial Officer

Exhibit Index

Exhibit Number	Description
10.19	Form Restricted Stock Unit Award Notification.*
10.20	Form Restricted Stock Unit Agreement.*

* Denotes a management contract, plan or arrangement.

Restricted Stock Unit Award Notification

To: «FIRST_NAME» «LAST_NAME»
 «EMAIL_ADDRESS»
 Employee ID: «ID»
 Subject: Restricted Stock Unit Grant

Congratulations! We are pleased to inform you that the Board of Directors has granted to you an award of Restricted Stock Units under the KLA-Tencor Corporation 2004 Equity Incentive Plan (the "EIP4 Equity Plan"). Subject to the provisions of the EIP4 Equity Plan and the Restricted Stock Unit Agreement, the principal features of this award are as follows:

Date of Grant: XXX

Award Number: «NUM»

**Maximum Number of
 Restricted Stock Units
 Awarded:**

«SHARES_GRANTED».

Each Restricted Stock Unit represents the right to receive one share of KLA-Tencor Corporation common stock upon the satisfaction of the applicable vesting requirements set forth below.

Vesting Schedule: The number of Restricted Stock Units in which you may actually vest shall be determined as follows:

(i) first, as soon as practicable following the completion of the audited financial statements for the Company's ___ fiscal year, the Administrator shall determine the level at which the applicable performance goal for that year (as set forth in attached Schedule A) has been attained and on the basis of that assessment determine the specific number of Restricted Stock Units hereby awarded to you in which you will have the potential to vest based on your continuation in Service Provider status. Such number may range from 0 Restricted Stock Units (if less than threshold attainment of the performance goal is attained) to the maximum number of Restricted Stock Units set forth above (if attainment is at or above the maximum specified goal). The actual number shall be determined on the basis of the matrix (and linear interpolation) set forth in attached Schedule A.

(ii) You shall vest in 50% of the number of Restricted Stock Units determined under subparagraph (i) upon your continuation in Service Provider status through ___.

(iii) You shall vest in the remaining 50% upon your continuation in Service Provider status through ___.

Vesting in your Restricted Stock Units will cease immediately upon your termination of Service Provider status for any reason, including pursuant to a reduction-in-force.

The issuance of shares of KLA-Tencor Corporation common stock upon the vesting of Restricted Stock Units is subject to compliance with all of the applicable requirements of all laws or regulations with respect to such units. Neither the grant of this award nor the vesting schedule alter the terms of your employment, which remain at-will and subject to termination by KLA-Tencor or you at any time, with or without cause or notice.

PLEASE BE SURE TO READ THE RESTRICTED STOCK UNIT AGREEMENT, WHICH CONTAINS SPECIFIC TERMS AND CONDITIONS APPLICABLE TO THIS AWARD. By accepting this award, you agree and understand that this award is subject to all of the terms and conditions contained in this Restricted Stock Unit Award Notification, the EIP4 Equity Plan document, and the Restricted Stock Unit Agreement. For copies of the Restricted Stock Unit Agreement and the EIP4 Equity Plan document, please see the Employee Stock Services Web-site, which can be accessed through the KLA-Tencor Intranet site: http://ktwebdev.kla-tencor.com/treasury/kla_web/sop_features.html

THIS MEMO, IS YOUR OFFICIAL NOTIFICATION OF THIS AWARD. NO ADDITIONAL DOCUMENTATION WILL BE SENT TO YOU CONCERNING THIS AWARD.

SCHEDULE A

**APPLICABLE PERFORMANCE GOAL AND MATRIX FOR DETERMINATION OF NUMBER OF RESTRICTED STOCK UNITS
SUBJECT TO POTENTIAL VESTING**

KLA-Tencor Corporation

2004 EQUITY INCENTIVE PLAN

RESTRICTED STOCK UNIT AGREEMENT

1. Grant. The Company hereby grants to the Employee named in the Restricted Stock Unit Award Notification an award of Restricted Stock Units ("RSUs"), as set forth in the Restricted Stock Unit Award Notification and subject to the terms and conditions in this Agreement and the Company's 2004 Equity Incentive Plan (the "Plan"). When the Shares are issued pursuant to RSUs which vest in accordance with paragraph 3, the par value per Share will be deemed paid by the Employee as a result of the services rendered by the Employee prior to the applicable vesting date. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Restricted Stock Unit Agreement.
 2. Company's Obligation. Each RSU represents the right to receive one Share on the vesting date of that unit. Unless and until the RSUs vest, the Employee will have no right to receive Shares under such RSUs. Prior to actual distribution of Shares pursuant to any vested RSUs, such RSUs will represent an unsecured obligation of the Company, payable (if at all) only from the general assets of the Company.
 3. Vesting Schedule. Subject to paragraph 4, the Employee will vest in the RSUs awarded by this Agreement according to the vesting schedule specified in the Restricted Stock Unit Award Notification. Accordingly, such vesting may be tied to the attainment of established performance goals and/or the completion of a specified period of Service Provider status.
 4. Administrator Discretion. The Administrator, in its discretion, may accelerate the vesting of the balance, or some lesser portion of the balance, of the RSU at any time, subject to the terms of the Plan. If so accelerated, such RSUs will be considered as having vested as of the date specified by the Administrator. If the Administrator, in its discretion, accelerates the vesting of the balance, or some lesser portion of the balance, of the RSUs, the Shares underlying those accelerated RSUs shall nevertheless be issued at the same time or times as if such RSUs had vested in accordance with the vesting schedule set forth in the Restricted Stock Unit Award Notification (whether or not the Employee remains in Service Provider status as of such date(s)). Accordingly, there shall be no acceleration of the payment date of the RSUs for which vesting is accelerated pursuant to this paragraph 4 or the issuance date of the Shares underlying those vesting-accelerated RSUs.
 5. Forfeiture upon Termination as Service Provider. Notwithstanding any contrary provision of this Agreement or the Restricted Stock Unit Award Notification, if the Employee terminates service as a Service Provider for any or no reason prior to vesting, the unvested RSUs awarded by this Agreement will thereupon be forfeited at no cost to the Company and without any payment (in cash or otherwise) due the Employee.
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6. Payment upon Vesting. Any RSUs that vest in accordance with paragraph 3 will be paid to the Employee (or in the event of the Employee's death, to his or her estate or designated beneficiaries) in Shares on the date those RSUs vest in accordance with the vesting schedule set forth in the Restricted Stock Unit Award Notification or as soon thereafter as practicable, subject to the tax withholding provisions of paragraph 8. Any RSUs that vest in accordance with paragraph 4 will be paid in Shares to the Employee (or in the event of the Employee's death, to his or her estate or designated beneficiaries) in accordance with the provisions of such paragraph, subject to tax withholding provisions of paragraph 8. In the event of any accelerated vesting of the RSUs pursuant to the provisions of Section 18(c)(ii) of the Plan, the Shares underlying those accelerated RSUs shall be issued on the accelerated vesting date or as soon thereafter as administratively practicable, subject to the tax withholding provisions of paragraph 8. For each RSU that vests, the Employee will receive one Share. In no event shall the Shares be issued later than the later of (i) the close of the calendar year in which the Shares vest or (for vesting-accelerated RSUs under paragraph 4) would have vested in the absence of such acceleration or (ii) the fifteenth (15th) day of the third (3rd) calendar month following such actual or deemed vesting date.

7. Payments after Death. Any distribution or delivery of Shares to be made to the Employee in accordance with the provisions of this Agreement will, if the Employee is then deceased, be made to the administrator or executor of the Employee's estate or the designated beneficiary or beneficiaries of the RSUs. The Shares shall be issued on the issuance date determined in accordance with the provisions of paragraph 6. Any such administrator, executor or beneficiary must furnish the Company with (a) written notice of his or her status as such and (b) evidence satisfactory to the Company to establish the validity of the transfer and compliance with any laws or regulations pertaining to said transfer. The Employee may make a beneficiary designation with respect to the RSUs by filing the appropriate form with the Administrator or its designate

8. Adjustment in Shares. Should any change be made to the Common Stock by reason of any stock split, stock dividend, spin-off transaction, extraordinary distribution (whether made in cash, securities or other property), recapitalization, combination of shares, exchange of shares or other change affecting the outstanding Common Stock as a class without the Company's receipt of consideration, then equitable adjustments shall be made by the Administrator to the total number and/or class of securities issuable pursuant to this Award. Such adjustments shall be made in such manner as the Administrator deems appropriate in order to reflect such change and thereby preclude a dilution or enlargement of benefits hereunder.

9. Withholding of Taxes. When the Shares are issued as payment for vested RSUs, the Company will withhold a portion of the vested RSUs that have an aggregate Fair Market Value sufficient to pay the minimum federal, state and local income, employment and any other applicable taxes required to be withheld by the Company, unless the Company, in its sole discretion, either requires or otherwise permits the Employee to make alternate arrangements satisfactory to the Company for such withholdings in advance of the arising of any withholding obligations. The number of Shares withheld pursuant to the prior sentence will be rounded up to the nearest whole Share, with no cash payment due the Employee for the value of any Share

withheld in excess of the tax obligation as a result of such rounding. Notwithstanding any contrary provision of this Agreement, no Shares will be issued unless and until satisfactory arrangements (as determined by the Company) have been made by the Employee with respect to the payment of any income and other taxes which the Company determines must be withheld or collected with respect to such Shares. In addition and to the maximum extent permitted by law, the Company (or the employing Subsidiary) has the right to retain without notice from salary or other amounts payable to the Employee, cash having a sufficient value to satisfy any tax withholding obligations that the Company determines cannot be satisfied through the withholding of otherwise deliverable Shares. All income and other taxes related to the RSU award and any Shares delivered in payment thereof are the sole responsibility of the Employee. By accepting this RSU award, the Employee expressly consents to the withholding of Shares and to any additional cash withholding as provided for in this paragraph 9.

10. Rights as Stockholder. Neither the Employee nor any person claiming under or through the Employee will have any of the rights or privileges of a stockholder of the Company in respect of any Shares deliverable hereunder unless and until certificates representing such Shares are issued, recorded on the records of the Company or its transfer agents or registrars, and delivered to the Employee or Employee's broker.

11. No Effect on Employment. The Employee's employment or other Service Provider status with the Company and its Subsidiaries is on an at-will basis only. Accordingly, the terms of the Employee's employment or other Service Provider status with the Company and its Subsidiaries will be determined from time to time by the Company or the Subsidiary employing or retaining the Employee (as the case may be), and the Company or the Subsidiary will have the right, which is hereby expressly reserved, to terminate or change the terms of the employment or service relationship of the Employee at any time for any reason whatsoever, with or without good cause or notice.

12. Address for Notices. Any notice to be given to the Company under the terms of this Agreement must be addressed to the Company at 3 Technology Drive, Milpitas, California 95035, Attn: Stock Administration, or at such other address as the Company may hereafter designate in writing or electronically.

13. Grant is Not Transferable. Except to the limited extent provided in paragraph 7, this grant and the rights and privileges conferred hereby will not be transferred, assigned, pledged or hypothecated in any way (whether by operation of law or otherwise) and will not be subject to sale under execution, attachment or similar process. Upon any attempt to transfer, assign, pledge, hypothecate or otherwise dispose of this grant, or any right or privilege conferred hereby, or upon any attempted sale under any execution, attachment or similar process, this grant and the rights and privileges conferred hereby immediately will become null and void.

14. Restrictions on Sale of Securities. Subject to the provisions of paragraph 16, the Company shall use its best efforts to assure that the Shares issued in payment of the vested RSUs are registered under the federal securities laws or qualify for an available exemption from such registration requirements and are accordingly freely tradable. However, any sale of the Shares

will be subject to any market blackout-period that may be imposed by the Company and must comply with the Company's insider trading policies, and any other applicable securities laws.

15. Binding Agreement. Subject to the limitation on the transferability of this grant contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

16. Additional Conditions to Issuance of Stock. If at any time the Company determines, in its discretion, that the listing, registration or qualification of the Shares upon any securities exchange or under any state or federal law, or the consent or approval of any governmental regulatory authority is necessary or desirable as a condition to the issuance of Shares to the Employee (or his or her estate or beneficiary), such issuance will not occur unless and until such listing, registration, qualification, consent or approval have been effected or obtained, free of any conditions not acceptable to the Company. The Company will make all reasonable efforts to meet the requirements of any such state or federal law or securities exchange and to obtain any such consent or approval of any such governmental authority. In no event, however, shall any Shares be issued in contravention of applicable federal and state securities laws or other regulatory requirements.

17. Plan Governs. This Agreement and the Restricted Stock Unit Award Notification are subject to all terms and provisions of the Plan. In the event of a conflict between one or more provisions of this Agreement or the Restricted Stock Unit Award Notification and one or more provisions of the Plan, the provisions of the Plan will govern.

18. Administrator Authority. The Administrator will have the power to interpret the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret or revoke any such rules (including, but not limited to, the determination of whether or not any RSUs have vested). All actions taken and all interpretations and determinations made by the Administrator in good faith will be final and binding upon Employee, the Company and all other interested persons. No member of the Administrator will be personally liable for any action, determination or interpretation made in good faith with respect to the Plan or this Agreement.

19. Captions. Captions provided herein are for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

20. Agreement Severable. In the event that any provision in this Agreement will be held invalid or unenforceable, such provision will be severable from, and such invalidity or unenforceability will not be construed to have any effect on, the remaining provisions of this Agreement.

21. Modifications to the Agreement. This Agreement constitutes the entire understanding of the parties on the subjects covered. The Employee expressly warrants that he or she is not accepting this Agreement in reliance on any promises, representations, or inducements other than those contained herein. Modifications to this Agreement or the Plan can be made only

in an express written contract executed by a duly authorized officer of the Company. Notwithstanding anything to the contrary in the Plan or this Agreement, the Company reserves the right to amend this Agreement as it deems necessary or advisable, in its sole discretion and without the consent of the Employee, to comply with Section 409A of the Code or to otherwise avoid imposition of any additional tax or income recognition under Section 409A of the Code prior to the actual payment of Shares pursuant to this RSU award.

22. Amendment, Suspension or Termination of the Plan By accepting this RSU award, the Employee expressly warrants that he or she has received a right to purchase stock under the Plan, and has received, read and understood a description of the Plan. The Employee understands that the Plan is discretionary in nature and may be modified, suspended or terminated by the Company at any time.

23. Electronic Delivery. The Company may, in its sole discretion, decide to deliver any documents related to RSUs awarded under the Plan or future RSUs that may be awarded under the Plan by electronic means or request the Employee's consent to participate in the Plan by electronic means. By accepting this RSU award, the Employee hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

24. Notice of Governing Law. This RSU award shall be governed by, and construed in accordance with, the laws of the State of California without regard to principles of conflict of laws.