UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE TO

(Rule 13e-4)

TENDER OFFER STATEMENT UNDER SECTION 14(d)(1) OR 13(e)(1)

OF THE SECURITIES EXCHANGE ACT OF 1934

(AMENDMENT NO. 3)

KLA-TENCOR CORPORATION

(Name of Subject Company (Issuer) and Filing Person (Offeror))

Options to Purchase Shares of Common Stock, Par Value \$0.001 Per Share

(Title of Class of Securities)

482480100

(CUSIP Number of Class of Securities)

(Underlying Common Stock)

Jeffrey L. Hall

Senior Vice President and Chief Financial Officer

KLA-Tencor Corporation

160 Rio Robles

San Jose, California 95134

(408) 875-3000

(Name, address and telephone number of person authorized to receive notices and communications on behalf of filing person)

Copy to:

S. James DiBernardo, Esq.

Jill Mather Bartow, Esq.

Morgan, Lewis, & Bockius LLP

Two Palo Alto Square

Palo Alto, California 94306

(650) 843-4000

CALCULATION OF FILING FEE

Transaction valuation* \$141,307,107.00

Amount of filing fee** \$4,338.13***

- * The transaction valuation set forth above is based on the Black-Scholes option valuation model, and assumes that all outstanding options eligible for tender covering an aggregate of 5,139,344 shares of common stock of KLA-Tencor Corporation will be amended pursuant to this offer, which may not occur.
- ** The amount of the filing fee, calculated in accordance with Rule 0-11 under the Securities Exchange Act of 1934, as amended, as modified by Fee Advisory No. 5 for fiscal year 2007, equals \$30.70 per \$1,000,000 of transaction valuation. The transaction valuation set forth above was calculated for the sole purpose of determining the filing fee, and should not be used or relied upon for any other purpose.
- *** Previously paid.
- Check box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

Amount Previously Paid:

Form or Registration No.:

Filing party:

Not applicable.

Not applicable.

Not applicable.

Not applicable.

Not applicable.

" Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

- " third party tender offer subject to Rule 14d-1.
- x issuer tender offer subject to Rule 13e-4.
- " going-private transaction subject to Rule 13e-3.
- " amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of the tender offer. "

Introductory Statement

This Amendment No. 3 (this Amendment) amends and supplements the Tender Offer Statement on Schedule TO (the Schedule TO) filed with the Securities and Exchange commission (the SEC) on February 27, 2007, relating to our offer to amend or replace outstanding. Eligible Options (as defined in the Offer to Amend or Replace attached to the Schedule TO as Exhibit (a)(1)) held by current employees subject to taxation in the United States so that those options will not be subject to Section 409A of the Internal Revenue Code. Except as amended and supplemented hereby and by Amendment No. 1 and Amendment No. 2 thereto, all terms of the Schedule TO and the Offer to Amend or Replace and all disclosure set forth in the Schedule TO and Exhibits thereto remain unchanged.

SUMMARY TERM SHEET

The information set forth in the Summary Term Sheet of the Offer to Amend or Replace is hereby amended as follows: The first paragraph under the question entitled ARE KLA-TENCOR EXECUTIVE OFFICERS AND NON-EMPLOYEE DIRECTORS ELIGIBLE TO PARTICIPATE IN THE OFFER? is deleted in its entirety and replaced with the following language: Our executive officers and non-employee members of our Board of Directors are not eligible to participate in the Offer. The first sentence of the second paragraph under the question entitled ARE KLA-TENCOR EXECUTIVE OFFICERS AND NON-EMPLOYEE DIRECTORS ELIGIBLE TO PARTICIPATE IN THE OFFER? is amended to read as follows: However, Richard Wallace, our Chief Executive Officer holds certain stock options that would have been Eligible Options but for the fact that the exercise prices for those options were amended on terms similar to the terms of this Offer on December 28, 2006. The third paragraph under the question entitled ARE KLA-TENCOR EXECUTIVE OFFICERS AND NON-EMPLOYEE DIRECTORS ELIGIBLE TO PARTICIPATE IN THE OFFER? is deleted in its entirety. The second paragraph under the question entitled WHAT DOES KLA-TENCOR THINK OF THE OFFER? is deleted in its entirety and replaced with the following language: Our executive officers and non-employee members of our Board of Directors are not eligible to participate in the Offer. (Pages 31-32) .

ITEM 1. ELIGIBLE OPTIONES; ELIGIBLE OPTIONS; AMENDMENT OF ELIGIBLE OPTIONS AND CASH BONUS; NEW OPTIONS; EXPIRATION DATE; ADDITIONAL CONSIDERATIONS.

The information set forth in Item 1 of the Offer to Amend or Replace, entitled Eligible Optiones; Eligible Options; Amendment of Eligible Options and Cash Bonus; New Options; Expiration Date; Additional Considerations is hereby amended as follows: The second and third paragraphs in the Section entitled Eligible Optionees of Item 1 are deleted in their entirety and replaced with the following language: Our executive officers and non-employee members of our Board of Directors are not eligible to participate in the Offer.

ITEM 12. INTERESTS OF DIRECTORS AND OFFICERS; TRANSACTIONS AND ARRANGEMENTS CONCERNING THE OPTIONS; AND MATERIAL AGREEMENTS WITH DIRECTORS AND OFFICERS.

The information set forth in Item 12 of the Offer to Amend or Replace, entitled Interests of Directors and Officers; Transactions and Arrangements Concerning the Options; and Material Agreements with Directors and Officers is hereby amended as follows: The second paragraph of Item 12 is deleted in its entirety and replaced with the following language: Our executive officers and non-employee members of our Board of Directors are not eligible to participate in the Offer. The first sentence of the third paragraph of Item 12 is amended to read as follows: However, Richard Wallace, our Chief Executive Officer holds certain stock options that would have been Eligible Options but for the fact that the exercise prices for those options were amended on December 28, 2006 on terms similar to the terms of this Offer. The sixth paragraph of Item 12 is deleted in its entirety.

ITEM 12. EXHIBITS.

Exhibit (a)(22) to this Amendment is hereby filed as Exhibit (a)(22) to the Schedule TO.

(a)(1)	Offer to Amend or Replace, dated February 27, 2007.*
(a)(2)	Email Announcement of Offer to Amend or Replace, dated February 27, 2007.*
(a)(3)	Frequently Asked Questions.***
(a)(4)	Screenshot of Login Page to Offer website at https://kla.equitybenefits.com.*
(a)(5)	Screenshot of Welcome Page to Offer website at https://kla.equitybenefits.com.*
(a)(6)	Screenshot of Electronic Election Form (screenshots 1-2).**
(a)(7)	Screenshot of Election Amendment Review.**
(a)(8)	Screenshot of Agreement to Terms of Election (screenshots 1-3).*
(a)(9)	Screenshot of Print Confirmation.**
(a)(10)	Screenshot of Election Confirmation Statement.**
(a)(11)	Instructions to Electronic Election Form.*
(a)(12)	Form of Stock Option Amendment and Special Bonus Agreement.***
(a)(13)	Form of Acknowledgement of Receipt of Election Form.**
(a)(14)	Form of Email Reminder of Expiration Date.*
(a)(15)	Paper Election Form.**
(a)(16)	Form of Notice of Expiration of Offer, Amendment of Eligible Option and Commitment to Pay Cash Bonus.***
(a)(17)	Material Income Tax Consequences for Eligible Optionees Resident Outside the United States.***
(a)(18)	KLA-Tencor Corporation Annual Report on Form 10-K for the year ended June 30, 2006, filed with the SEC on January 29, 2007 is incorporated herein by reference.
(a)(19)	KLA-Tencor Corporation Quarterly Report on Form 10-Q for its fiscal quarter ended September 30, 2006, filed with the SEC on January 29, 2007, is incorporated herein by reference.
(a)(20)	Email Containing Hyperlink to Offer to Amend or Replace and Information Regarding Eligible Options, dated March 2, 2007.**
(a)(21)	Email Announcing Change to Scheduled Payment Date of Cash Bonus.***
(a)(22)	Email Notice Regarding Eligibility of Executive Officers.
(b)	Not applicable.
(d)(1)	KLA-Tencor Corporation Restated 1982 Stock Option Plan, as amended November 18, 1996 is incorporated herein by reference from Exhibit 10.74 to Form S-8, filed with the SEC on March 7, 1997.
(d)(2)	KLA-Tencor Corporation Restated 1982 Stock Option Plan Form of Stock Option Agreement.*
(d)(3)	KLA-Tencor Corporation 2000 Nonstatutory Stock Option Plan is incorporated herein by reference from Exhibit 10.3 to Form S-8, filed with the SEC on September 27, 2002.
(d)(4)	KLA-Tencor Corporation 2000 Nonstatutory Stock Option Plan Form of Stock Option Agreement.*

(d)(5)	KLA-Tencor Corporation 2004 Equity Incentive Plan is incorporated herein by reference from Exhibit 10.1 to Form S-8, filed with the SEC on December 23, 2004.
(d)(6)	KLA-Tencor Corporation 2004 Equity Incentive Plan Form of Stock Option Agreement.*
(g)	Not applicable.
(h)	Not applicable.
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^{*} Previously filed with the Schedule TO filed with the SEC on February 27, 2007, and incorporated herein by reference.

ITEM 13. INFORMATION REQUIRED BY SCHEDULE 13E-3.

(a) Not applicable.

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^{**} Previously filed with the Schedule TO-I/A filed with the SEC on March 2, 2007, and incorporated herein by reference.

^{***} Previously filed with the Schedule TO-I/A filed with the SEC on March 13, 2007, and incorporated herein by reference.

SIGNATURE

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this Amendment No. 3 to Schedule TO is true, complete and correct.

KLA-TENCOR CORPORATION

By: /s/ Jeffrey L. Hall Jeffrey L. Hall

Chief Financial Officer

Date: March 16, 2007

INDEX OF EXHIBITS

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