

Bell Bobby R
 Form 4
 November 17, 2011

FORM 4 UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 Bell Bobby R

2. Issuer Name and Ticker or Trading Symbol
 KLA TENCOR CORP [KLAC]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

____ Director
 Officer (give title below)
 ____ 10% Owner
 ____ Other (specify below)
 Executive Vice President

(Last) (First) (Middle)
 C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE
 (Street)

3. Date of Earliest Transaction (Month/Day/Year)
 11/15/2011

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

MILPITAS, CA 95035

(City) (State) (Zip)

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | | |
|---------------------------------------|--------------------------------------|--|--------------------------------|---|---|--|---|--------|---|
| | | | | (A) or (D) | Price | | | | |
| | | | | Code | V | Amount | | | |
| Common Stock | 11/15/2011 | | A | 10,458 | A | 11 | 32,810 | D | |
| Common Stock | 11/15/2011 | | F | 4,882 | D | (2) | \$ 48.42 | 27,928 | D |
| Common Stock | 11/17/2011 | | S | 1,394 | D | (3) | \$ 47.3 | 26,534 | D |
| Common Stock - Restricted Stock Units | | | | | | (5) | 85,700 | D | |

(4)

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Owned Beneficially (Instr. 5) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|--|
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|--|

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|--|---------------|-----------|--------------------------|-------|
| | Director | 10% Owner | Officer | Other |
| Bell Bobby R C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035 | | | Executive Vice President | |

Signatures

Brian M. Martin as Attorney-in-Fact for Bobby R. Bell
11/17/2011

**Signature of Reporting Person

Date

Explanation of Responses:

* If the form is filed by more than one reporting person, see Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) On November 15, 2007, Mr. Bell received a grant of performance-based restricted stock units ("RSUs") that, following the completion of fiscal year 2008, were determined by the Compensation Committee of KLA-Tencor's Board of Directors (in August 2008) to cover, based on KLA-Tencor's financial performance during fiscal year 2008, 20,917 shares of KLA-Tencor common stock. On November 15, 2011, Mr. Bell vested in the remaining fifty percent (50%) of such RSUs.

(2)

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Pursuant to the terms of the November 15, 2007 performance-based RSU grant, 4,882 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax withholding. The fair market value of KLA-Tencor common stock used for purposes of calculating the number of shares to be withheld was the closing price of KLA-Tencor common stock as reported on the NASDAQ Stock Market on such vesting date.

- (3) This sale was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on September 1, 2011.
- (4) Each RSU represents a contingent right to receive one share of KLA-Tencor common stock.

Does not include performance-based RSUs, if any, held by the Reporting Person for which an assessment has not yet been made

- (5) regarding the achievement of the applicable performance goals. Any such holdings will be reported on Form 4 within two business days of the date such assessment is made.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

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