| FORM 4 | 4 |
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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). | |

(Print or Type Perponses)

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

OMB APPROVAL OMB Number: 3235-0287 Estimated average burden hours per response... 0.5

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting P KENNEDY KEVIN (Last) (First) C/O KLA-TENCOR CORPO TECHNOLOGY DRIVE | (Middle) | 2. Issuer Name an KLA TENCOR 3. Date of Earliest 11/07/2012 | CORP [] | KLA | NC] | | | 5. Relationship of Reporting Perso (Check all applied) | · · · | |
|---|--|--|--------------|--------|---|---------------|-------|---|----------------------------------|-------------------------|
| (Street) MILPITAS, CA 95035 | | 4. If Amendment, I | Date Origin | al Fil | ed(Month/D | ay/Year) | | 6. Individual or Joint/Group Filing _X_Form filed by One Reporting Person Form filed by More than One Reporting | · · · | ble Line) |
| (City) (State) | (Zip) | Tat | ole I - Non- | Deri | vative Se | curities | Acqu | ired, 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) | (Instr. 8) | | 4. Securi (A) or Di (D) (Instr. 3, | isposed | of | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | | Beneficial Ownership |
| | | | Code | v | Amount | (A) or (D) | Price | | or Indirect (I) (Instr. 4) | (Instr. 4) |
| Common Stock - Restricted Stock Units (1) | 11/07/2012 | | А | | 2,558 (2) | А | \$ 0 | 2,558 | D | |
| Common Stock | | | | | | | | 13,728 | Ι | By Trust (3) |
| Common Stock | | | | | | | | 2,539 | D | |

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

SEC 1474 (9-02)

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned

| | | | (e.g.,] | puts, calls, | war | rrant | s, op | tions, conver | tible securi | ties) | | | | | |
|-------------|-------------|------------------|--------------------|--------------|-----|--------|-------|---------------------|--------------|--------|---------|-------------|----------------|-------------|-------------|
| 1. Title of | 2. | 3. Transaction | 3A. Deemed | 4. | 5 | 5. | | 6. Date Exer | cisable | 7. Tit | le and | 8. Price of | 9. Number of | 10. | 11. Nature |
| Derivative | Conversion | Date | Execution Date, if | Transactio | n N | Numb | er | and Expirati | on Date | Amo | unt of | Derivative | Derivative | Ownership | of Indirect |
| Security | or Exercise | (Month/Day/Year) | any | Code | 0 | of | | (Month/Day | /Year) | Unde | rlying | Security | Securities | Form of | Beneficial |
| (Instr. 3) | Price of | | (Month/Day/Year) | (Instr. 8) | Ľ | Deriva | ative | | | Secur | rities | (Instr. 5) | Beneficially | Derivative | Ownership |
| | Derivative | | | | S | Securi | ities | | | (Instr | . 3 and | | Owned | Security: | (Instr. 4) |
| | Security | | | | A | Acqui | red | | | 4) | | | Following | Direct (D) | |
| | | | | | (4 | A) or | • | | | | | | Reported | or Indirect | |
| | | | | | Γ | Dispo | sed | | | | | | Transaction(s) | (I) | |
| | | | | | | of (D) | | | | | | | (Instr. 4) | (Instr. 4) | |
| | | | | | | Instr. | | | | | | | | | |
| | | | | | 4 | l, and | 5) | | | | | | | | |
| | | | | | | | | | | | Amount | | | | |
| | | | | | | | | Dete | E | | or | | | | |
| | | | | | | | | Date Exercisable | Expiration | Title | Number | | | | |
| | | | | | | | | Exercisable | Date | | of | | | | |
| | | | | Code V | V (| (A) | (D) | | | | Shares | | | | |

Reporting Owners

| | | Relationsh | nips | |
|---|----------|--------------|---------|-------|
| Reporting Owner Name / Address | Director | 10% Owner | Officer | Other |
| KENNEDY KEVIN C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035 | Х | | | |

Signatures

| Brian M. Martin as Attorney-in-Fact for Kevin J. Kennedy 11/09/2012 |
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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) Each restricted stock unit ("RSU") represents a contingent right to receive one share of KLA-Tencor common stock.
- (2) The RSUs will fully vest one year from the date of grant and will be deliverable on such date.
- (3) Shares held by the Kennedy Family Trust U/A/D 11/19/98, of which the Reporting Person is a trustee and beneficiary.

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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