| FORM 4 | 4 |
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| | 1 |
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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). | |

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

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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 Per BOND ROBERT T | 2. Issuer Name an KLA TENCOR | | | 0, | ool | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) X Director 10% Owner | | | |
|---|--|---|--------------|------------|--|--|---|--|--|-------------------------|
| (Last) (First) C/O KLA-TENCOR CORPOR TECHNOLOGY DRIVE | 3. Date of Earliest 7 11/04/2009 | Fransaction | n (Mo | onth/Day/Y | (ear) | | Officer (give title below) | Other (specify b | pelow) | |
| (Street) MILPITAS, CA 95035 | | 4. If Amendment, I | Date Origin | al Fil | ed(Month/D | ay/Year) | 6. Individual or Joint/Group Filing(Check Applicable Line) _X_Form filed by One Reporting Person Form filed by More than One Reporting Person | | | |
| (City) (State) | (Zip) | Tat | ole I - Non- | -Deri | ivative Se | 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. 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) | Ownership of Indirec Form: Beneficia Direct (D) Ownershi | Beneficial Ownership |
| | | | Code | v | Amount | (A) or (D) | Price | | or Indirect (I) (Instr. 4) | (Instr. 4) |
| Common Stock - Restricted Stock Units (1) | 11/04/2009 | | А | | 3,148 (2) | А | \$ 0 | 9,416 | D | |
| Common Stock | | | | | | | 5,036 | D | | |

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

Persons who respond to the collection of information

SEC 1474 (9-02)

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, warrants, options, convertible securities) | | | | | | | | | | | | | | |
|-------------|--|------------------|--------------------|------------|------------|--------|--------|--------------|------------|--------|---------|-------------|----------------|-------------|-------------|
| 1. Title of | 2. | 3. Transaction | 3A. Deemed | 4. | | 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 | m | Numb | ber | and Expirati | on Date | Amo | unt of | Derivative | Derivative | Ownership | of Indirect |
| Security | or Exercise | (Month/Day/Year) | any | Code | | of | | (Month/Day | /Year) | Unde | rlying | Security | Securities | Form of | Beneficial |
| (Instr. 3) | Price of | | (Month/Day/Year) | (Instr. 8) | | Deriv | ative | | | Secur | rities | (Instr. 5) | Beneficially | Derivative | Ownership |
| | Derivative | | | | | Secur | ities | | | (Instr | . 3 and | | Owned | Security: | (Instr. 4) |
| | Security | | | | | Acqui | ired | | | 4) | | | Following | Direct (D) | |
| | | | | | | (A) 01 | ſ | | | | | | Reported | or Indirect | |
| | | | | | | Dispo | sed | | | | | | Transaction(s) | (I) | |
| | | | | | | of (D) |) | | | | | | (Instr. 4) | (Instr. 4) | |
| | | | | | (Instr. 3, | | | | | | | | | | |
| | | | | | ŀ | 4, and | and 5) | | | | | | | | |
| | | | | | | | | | | | Amount | | | | |
| | | | | | | | | Date | Expiration | | or | | | | |
| | | | | | | | | Exercisable | * | Title | Number | | | | |
| | | | | | | | | Excicisable | Date | | of | | | | |
| | | | | Code | V | (A) | (D) | | | | Shares | | | | |

Reporting Owners

| | Relationships | | | | | | |
|---|---------------|--------------|---------|-------|--|--|--|
| Reporting Owner Name / Address | Director | 10% Owner | Officer | Other | | | |
| BOND ROBERT T C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035 | Х | | | | | | |

Signatures

| Brian M. Martin as Attorney-in-Fact for Robert T. Bond | 11/05/2009 |
|--|------------|
| **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) Each restricted stock unit represents a contingent right to receive one share of KLA-Tencor common stock.
- (2) The restricted stock units will fully vest one year from date of grant and will be deliverable on such date.

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

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