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

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5. Relationship of Reporting Person(s) to Issuer

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 Responses)

1. Name and Address of Reporting Person *

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

2. Issuer Name and Ticker or Trading Symbol

| 1. Name and URBANE | | 2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC] | | | | | | | | X_ Director 10% Owner 10 | | | | | | | | | |
|---|---|--|---|---|--|--|---------------|---|---------------------------|--|---|-----------------------------------|-------------------------------|--|------------------------|---|--|---|---------------------------------------|
| C/O KLA ROBLES | 337 1 CO DIO | 3. Date of Earliest Transaction (Month/Day/Year) 02/14/2007 | | | | | | | | | | Officer (give | title below) | | Other (sp | ecify below) | | | |
| (Street) | | | | | 4. If Amendment, Date Original Filed(Month/Day/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 | | | | | |
| SAN JOSE, CA 95130 | | | | | | | | | | | | | | | | | | | |
| (City) |) | (State) | (Zip) | Table I - Non-Derivative Securities Acqui | | | | | | | uired, 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) | | ate, if | (Instr. 8) | | 4. Securities Acquir (A) or Disposed of ((Instr. 3, 4 and 5) | | | 5. Amount of Securities Ber Owned Following Reported Transaction(s) (Instr. 3 and 4) | | | eficially 6. Ownership Form: Direct (D) or Indirect | | ship Indire Benef (D) Owne | ricial ership | | |
| | | | | | | | Co | de V | Am | ount | (A) or (D) | Price | | | | | (I) (Instr. 4 | Ì | |
| Common | Stock | | | | | | | | <u> </u> | | | | 1,946 | | | | D | | |
| Common | Stock | | | | | | | | | | | | 29,555 | | | | I | Fam Four | ily ndation |
| Common | Stock | | | | | | | | | | | | 1,271 | ,414 | | | I | by T | rust |
| Common Units (1) | Stock-Res | tricted Stock | | | | | | | | | | | 1,000 | | | | D | | |
| Derivative | 2. Conversion | | | 4. Transac | ts, ca | 5. Num of | rrant iber | quired, D ts, options 6. Date E Expiration | ispos s, con exerci | ed of vertiles te | , or Bene ble securi | ralid (ficiall) ties) 7. Ti of U | y Owner of the and onderly in | ed Amount | 8. Price of Derivative | 9. Numb Derivativ | ve (| | 11. Nature of Indirect |
| Security | or Exercise Price of Derivative Security | (Month/Day/Year) | | Code | | Deriva Securit Acquir (A) or Dispos of (D) (Instr. 2 and 5) | ed ed | (Month/I | | | | Secu | curities | | Security (Instr. 5) | Securitie Beneficia Owned Followin Reported Transact (Instr. 4) | es land land land land land land land land | Form of Derivative Security: Direct (D) or Indirect | Beneficial Ownership (Instr. 4) |
| | | | | Code | V | (A) | (D) | Date Exercisal | ble | Expi Date | iration | Title | ; | Amount or Number of Shares | | | | | |
| Non- Qualified Stock Option (right to buy) | \$ 50.39 | 02/14/2007 | | A | | 1,250 | | 02/14/2 | :007 | 02/1 | 14/2014 | | nmon tock | 1,250 | \$ 0 | 1,25 | 50 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 50.39 | 02/14/2007 | | A | | 1,250 | | 02/14/2 | 2007 | 02/ | 14/2014 | | nmon tock | 1,250 | \$ 0 | 2,50 | 00 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 13.44 | | | | | | | 07/22/1 | 999 | 07/2 | 22/2008 | | nmon tock | 5,000 | | 5,00 | 00 | D | |

| Non- Qualified Stock Option (right to buy) | \$ 17.59 | | | 11/17/1998 | 11/17/2008 | Common Stock | 6,666 | 6,666 | D | |
|---|----------|--|--|------------|------------|-----------------|--------|--------|---|--|
| Non- Qualified Stock Option (right to buy) | \$ 26.25 | | | 11/10/2000 | 11/10/2010 | Common Stock | 10,000 | 10,000 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 29 | | | 07/22/1998 | 07/22/2007 | Common Stock | 5,000 | 5,000 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 37.05 | | | 11/08/2002 | 11/08/2012 | Common Stock | 10,000 | 10,000 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 40.24 | | | 05/11/2005 | 05/11/2015 | Common Stock | 2,500 | 2,500 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 40.68 | | | 10/18/2004 | 10/18/2014 | Common Stock | 2,500 | 2,500 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 41.45 | | | 08/01/2006 | 08/01/2013 | Common Stock | 1,250 | 1,250 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 44.76 | | | 01/25/2005 | 01/25/2015 | Common Stock | 2,500 | 2,500 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 46.28 | | | 11/16/1999 | 11/16/2009 | Common Stock | 10,000 | 10,000 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 47.23 | | | 11/09/2001 | 11/09/2011 | Common Stock | 10,000 | 10,000 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 47.86 | | | 05/02/2006 | 05/02/2013 | Common Stock | 1,250 | 1,250 | D | |

| Non- Qualified Stock Option (right to buy) | \$ 49.99 | | | 11/04/2005 | 11/04/2012 | Common Stock | 1,250 | 1,250 | D | |
|---|----------|--|--|------------|------------|-----------------|--------|--------|---|--|
| Non- Qualified Stock Option (right to buy) | \$ 51.35 | | | 08/02/2005 | 08/02/2015 | Common Stock | 2,500 | 2,500 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 51.98 | | | 01/31/2006 | 01/31/2013 | Common Stock | 1,250 | 1,250 | D | |
| Non- Qualified Stock Option (right to buy) | \$ 59.44 | | | 11/05/2003 | 11/05/2013 | Common Stock | 10,000 | 10,000 | D | |

Reporting Owners

| | Relationships | | | | | | | |
|--|---------------|--------------|---------|-------|--|--|--|--|
| Reporting Owner Name / Address | Director | 10% Owner | Officer | Other | | | | |
| URBANEK LIDA C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130 | X | | | | | | | |

Signatures

| Lida Urbanek | 02/15/2007 |
|-------------------------------|------------|
| 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 KLAC common stock.

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.