

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

## 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

OMB Number: 3235-0287

Expires: January 31, 2005

Estimated average burden hours per response... 0.5

1. Name and Address of Reporting Person \*  
URBANEK LIDA

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

### 5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

C/O KLA-TENCOR  
CORPORATION, 160 RIO  
ROBLES

3. Date of Earliest Transaction  
(Month/Day/Year)  
12/14/2004

\_\_\_\_\_X\_\_\_\_\_ Director \_\_\_\_\_ 10% Owner  
 \_\_\_\_\_ Officer (give title \_\_\_\_\_ Other (specify  
 below) 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 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)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	12/14/2004		M		5,000	A	\$ 12.5	5,000	D	
Common Stock	12/14/2004		S		5,000	D	\$ 47.1658	0	D	
Common Stock								29,555	I	Family Foundation
Common Stock								1,271,414	I	by Trust

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

**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.**

SEC 1474  
(9-02)

**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 Underlying Security (Instr. 3 and 4)	Amount or Number of Shares
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	
Non-Qualified Stock Option (right to buy)	\$ 12.5	12/14/2004		M	5,000	06/13/1996	05/13/2006	Common Stock	5,000
Non-Qualified Stock Option (right to buy)	\$ 13.44					07/22/1999	07/22/2008	Common Stock	5,000
Non-Qualified Stock Option (right to buy)	\$ 17.59					11/17/1998	11/17/2008	Common Stock	6,667
Non-Qualified Stock Option (right to buy)	\$ 17.78					06/15/1995	05/15/2005	Common Stock	1,905
Non-Qualified Stock Option (right to buy)	\$ 26.25					11/10/2000	11/10/2010	Common Stock	10,000
Non-Qualified Stock Option (right to buy)	\$ 29					07/22/1998	07/22/2007	Common Stock	5,000
Non-Qualified Stock Option (right to buy)	\$ 37.05					11/08/2002	11/08/2012	Common Stock	10,000
Non-Qualified Stock Option (right to buy)	\$ 40.68					10/18/2004	10/18/2014	Common Stock	2,500
Non-Qualified Stock Option (right to buy)	\$ 46.28					11/16/1999	11/16/2009	Common Stock	10,000

Non-Qualified Stock Option (right to buy)	\$ 47.23	11/09/2001	11/09/2011	Common Stock	10,0
Non-Qualified Stock Option (right to buy)	\$ 59.44	11/05/2003	11/05/2013	Common Stock	10,0

## Reporting Owners

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

## Signatures

By: Stuart J. Nichols For: Lida  
Urbanek 12/15/2004

\_\_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).

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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