KLA TENCOR CORP

Form 4

January 18, 2011

FORM 4

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

OMB 3235-0287 Number:

OMB APPROVAL

January 31, Expires: 2005

0.5

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may continue.

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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 See Instruction

30(h) of the Investment Company Act of 1940

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * WALLACE RICHARD P			2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year)	X Director 10% Owner		
C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE			01/14/2011	_X_ Officer (give title Other (specibelow) below) President and CEO		
	(Street)		4. If Amendment, Date Original	6. Individual or Joint/Group Filing(Check		
MILPITAS, C	CA 95035		Filed(Month/Day/Year)	Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting Person		

(City)	(State) (Z	Zip) Table	I - Non-D	erivative S	ecurit	ties Acqu	ired, Disposed of	or Beneficiall	y Owned
1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any	3. Transaction Code	4. Securition(A) or Dis (Instr. 3, 4	sposed	of (D)	5. Amount of Securities Beneficially	6. Ownership Form: Direct	7. Nature of Indirect Beneficial
		(Month/Day/Year)	(Instr. 8) Code V	Amount	(A) or (D)	Price	Owned Following Reported Transaction(s) (Instr. 3 and 4)	(D) or Indirect (I) (Instr. 4)	Ownership (Instr. 4)
Common Stock	01/14/2011		M	9,000	A	\$ 29.31	134,757	D	
Common	01/14/10011		C	0.000	-	\$	105 757	-	

Common Stock	01/14/2011	S	9,000	D	\$ 41.84	125,757	D
Common Stock	01/14/2011	S	18,792	D	\$ 41.84	106,965	D

Common 317,945 (2) D Stock -

Restricted Stock Units (1)

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

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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. Transactic Code (Instr. 8)	5. Number proof Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	Expiration D	Date Exercisable and 7. Title and A Underlying S (Instr. 3 and s)		Securitie
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Amour or Number of Shares
Non-Qualified Stock Option (Right to Buy)	\$ 29.31	01/14/2011		M	9,000	(3)	10/02/2011	Common Stock	9,00

Reporting Owners

Reporting Owner Name / Address	Relationships						
· F · · · G · · · · · · · · · · · · · · · · · · ·	Director	10% Owner	Officer	Other			
WALLACE RICHARD P C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035	X		President and CEO				

Signatures

Brian M. Martin as Attorney-in-Fact for Richard P. 01/18/2011 Wallace Date

**Signature of Reporting Person

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) Does not include performance-based RSUs, if any, held by the Reporting Person for which an assessment has not yet been made regarding the achievement of the applicable performance goals. Any such holdings will be reported on Form 4 within two business days

Reporting Owners 2

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of the date such assessment is made.

Represents a stock option granted on October 2, 2001, granting the Reporting Person the right to purchase up to 28,500 shares of KLA-Tencor common stock. 9,000 of the shares subject to this stock option vested on the one-year anniversary of the grant date, and 1/48 of the remaining 19,500 shares subject to this stock option vested on the 13-month anniversary of the grant date and each monthly anniversary thereafter until October 2, 2006.

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.