

FORM 4

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

OMB APPROVAL	
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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).

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

(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) <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) President and CEO	
(Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE		3. Date of Earliest Transaction (Month/Day/Year) 08/06/2013			
(Street) MILPITAS, CA 95035		4. If Amendment, Date Original Filed(Month/Day/Year)		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person	
(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	08/06/2013		A		28,750	A	(1)	47,819	D	
Common Stock	08/06/2013		F		15,002 (2)	D	\$ 58.37	32,817	D	
Common Stock	08/06/2013		A		28,750	A	(3)	61,567	D	
Common Stock	08/06/2013		F		15,002 (4)	D	\$ 58.37	46,565	D	
Common Stock	08/06/2013		A		37,000	A	(5)	83,565	D	
Common Stock	08/06/2013		F		19,307 (6)	D	\$ 58.37	64,258	D	
Common Stock	08/06/2013		A		27,050	A	(7)	91,308	D	
Common Stock	08/06/2013		F		14,115 (8)	D	\$ 58.37	77,193	D	
Common Stock								13,838	I	By Trust (9)
Common Stock - Restricted Stock Units (10)	08/06/2013		A		54,100 (11) (12)	A	\$ 0	142,225 (13) (14)	D	
Common Stock - Restricted Stock Units (10)	08/06/2013		A		44,500 (15)	A	\$ 0	186,725 (13)	D	

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

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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 of Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V		Date Exercisable	Expiration Date					

Reporting Owners

Reporting Owner Name / Address	Relationships			
	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. Wallace		08/08/2013
**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) On August 6, 2009, Mr. Wallace received a grant of performance-based restricted stock units ("RSUs") that, following the completion of fiscal year 2010, was determined by the independent members of KLA-Tencor's Board of Directors (in August 2010) to cover, based on KLA-Tencor's financial performance during fiscal year 2010, 57,500 shares of KLA-Tencor common stock. On August 6, 2013, Mr. Wallace vested in fifty percent (50%) of such performance-based RSUs.

(2) Pursuant to the terms of the August 6, 2009 performance-based RSU grant, 15,002 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax withholding. The fair market value of KLA-Tencor common stock used for purposes of calculating the number of shares to be withheld was the closing price of KLA-Tencor common stock as reported on the NASDAQ Stock Market on such vesting date.

(3) On August 6, 2009, the Reporting Person received a grant of RSUs covering 57,500 shares of KLA-Tencor common stock. On August 6, 2013, the Reporting Person vested in fifty percent (50%) of such RSUs.

(4) Pursuant to the terms of the August 6, 2009 RSU grant, 15,002 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax withholding. The fair market value of KLA-Tencor common stock used for purposes of calculating the number of shares to be withheld was the closing price of KLA-Tencor common stock as reported on the NASDAQ Stock Market on such vesting date.

(5) On August 6, 2009, Mr. Wallace received a supplemental grant of RSUs covering 74,000 shares of KLA-Tencor common stock. On August 6, 2013, Mr. Wallace vested in fifty percent (50%) of such RSUs.

(6) Pursuant to the terms of the August 6, 2009 supplemental RSU grant, 19,307 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax withholding. The fair market value of KLA-Tencor common stock used for purposes of calculating the number of shares to be withheld was the closing price of KLA-Tencor common stock as reported on the NASDAQ Stock Market on such vesting date.

(7) On August 4, 2011, the Reporting Person received a grant of performance-based RSUs that, following the completion of fiscal year 2013, was determined by the independent members of KLA-Tencor's Board of Directors (on August 6, 2013) to cover, based on KLA-Tencor's financial performance during fiscal years 2012 and 2013, 54,100 shares of KLA-Tencor common stock. On August 6, 2013, the Reporting Person vested in fifty percent (50%) of such performance-based RSUs.

(8) Pursuant to the terms of the August 4, 2011 performance-based RSU grant, 14,115 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax withholding. The fair market value of KLA-Tencor common stock used for purposes of calculating the number of shares to be withheld was the closing price of KLA-Tencor common stock as reported on the NASDAQ Stock Market on such vesting date.

(9) Shares held under the Wallace Living Trust u/a/d 03/27/01, as amended, a trust of which the Reporting Person is a trustee and beneficiary.

(10) Each RSU represents a contingent right to receive one share of KLA-Tencor common stock.

(11) On August 4, 2011, in addition to the RSUs granted on that date that were subject only to service-vesting requirements (which RSUs have been previously reported on Form 4), the Reporting Person was also granted RSUs covering up to 54,100 shares of KLA-Tencor common stock, subject to both performance-vesting and service-vesting requirements. This is the performance-based RSU award that is described in footnote (7) above. Following the completion of KLA-Tencor's audited financial statements for the 2013 fiscal year, the independent members of KLA-Tencor's Board of Directors determined on August 6, 2013 the level at which the corporate performance goals were attained and, based on the assessment, determined that the number of shares subject to the RSUs is 54,100.

(12) The Reporting Person vested in fifty percent (50%) of the performance-based RSUs upon the date on which the independent members of KLA-Tencor's Board of Directors determined the level at which the underlying performance goals were attained (August 6, 2013) and will vest in the remaining fifty percent (50%) upon his completion of four years of service following the grant date of the award (August 4, 2011). The shares of common stock will be issued as the performance-based RSUs vest.

(13) 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 of the date such assessment is made.

(14) Reflects an increase of 54,100 RSUs in connection with the determination of the level at which the August 4, 2011 performance-based RSUs were attained, less the fifty percent (50%) of such award that vested upon such assessment, as described in footnote (7) above.

(15) Represents a grant of RSUs subject only to service-vesting requirements. The Reporting Person will vest in twenty-five percent (25%) of the RSUs on the one-year anniversary of the grant date (August 6, 2013) and an additional twenty-five percent (25%) on each annual anniversary of the grant date thereafter through August 6, 2017, in each case subject to the Reporting Person continuing as a service provider to KLA-Tencor through the applicable vesting date. The shares of common stock will be issued as the RSUs vest.

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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