

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) Director _____ 10% Owner _____ X Officer (give title below) _____ Other (specify below) _____ Executive Vice President				
(Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES		3. Date of Earliest Transaction (Month/Day/Year) 08/02/2004						
(Street) SAN JOSE, CA 95130		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				
(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								
						2,903	D	

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. 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	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Non-Qualified Stock Option (right to buy)	\$ 40.66	08/02/2004		A		11,250	(I)	10/27/2004	08/02/2014	Common Stock	11,250	\$ 0	11,250	D	
Non-Qualified Stock Option (right to buy)	\$ 26.25							11/10/2001	11/10/2010	Common Stock	7,000		7,000	D	
Non-Qualified Stock Option (right to buy)	\$ 29.31							10/02/2002	10/02/2011	Common Stock	25,500		25,500	D	
Non-Qualified Stock Option (right to buy)	\$ 32.75							04/04/2002	04/04/2011	Common Stock	8,459		8,459	D	

Non-Qualified Stock Option (right to buy)	\$ 34.67							11/08/2003	01/28/2013	Common Stock	20,000		20,000	D	
Non-Qualified Stock Option (right to buy)	\$ 37.05							11/08/2003	11/08/2012	Common Stock	10,000		10,000	D	
Non-Qualified Stock Option (right to buy)	\$ 40.14							05/22/2004	05/22/2013	Common Stock	1,000		1,000	D	
Non-Qualified Stock Option (right to buy)	\$ 44.6875							08/13/2000	08/13/2010	Common Stock	19,169		19,169	D	
Non-Qualified Stock Option (right to buy)	\$ 45.16							10/27/2004	04/26/2014	Common Stock	18,750		18,750	D	
Non-Qualified Stock Option (right to buy)	\$ 51.229							11/08/2003	07/30/2013	Common Stock	12,500		12,500	D	
Non-Qualified Stock Option (right to buy)	\$ 53.86							10/27/2004	10/27/2013	Common Stock	30,000		30,000	D	
Non-Qualified Stock Option (right to buy)	\$ 58.10							10/27/2004	01/27/2014	Common Stock	15,000		15,000	D	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
WALLACE RICHARD P C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130			Executive Vice President	

Signatures

By: Stuart J. Nichols For: Richard P. Wallace		08/09/2004
 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).

(1) Form filings are completed by the Company on behalf of the officer listed. Due to an administrative error, this grant of options is being reported late.

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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