Martin Brian Form 4 August 05, 2009

FORM 4

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

Check this box if no longer subject to Section 16. Form 4 or

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES**

Form 5 obligations may continue. See Instruction 1(b).

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

(Print or Type Responses)

C/O KLA-TENCOR

CORPORATION, ONE

TECHNOLOGY DRIVE

(Last)

1. Name and Address of Reporting Person * Martin Brian

(First)

(Middle)

2. Issuer Name and Ticker or Trading Symbol

KLA TENCOR CORP [KLAC]

3. Date of Earliest Transaction

(Month/Day/Year) 08/03/2009

Director 10% Owner Other (specify _X__ Officer (give title below)

(Check all applicable)

5. Relationship of Reporting Person(s) to

OMB APPROVAL

3235-0287

January 31,

2005

0.5

OMB

Number:

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response...

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burden hours per

Senior VP & General Counsel

(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

Issuer

MILPITAS, CA 95035

							Person			
	(City)	(State) (Z	Cip) Table	I - Non-De	rivative Se	curiti	es Acq	uired, Disposed o	f, or Beneficial	ly 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 on(A) or Disposed of (D) (Instr. 3, 4 and 5)		5. Amount of Securities Beneficially Owned Following Reported Transaction(s)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code V	Amount	or (D)	Price	(Instr. 3 and 4)		
	Common Stock - Restricted Stock Units	08/03/2009		A	11,050 (2)	A	\$0	43,972 (3)	D	
	Common Stock - Restricted Stock Units	08/03/2009		A	19,400 (2)	A	\$0	63,372 (3)	D	
								0.074(4)	D	

Common Stock

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	2.	3. Transaction Date	3A. Deemed	4.	5.	6. Date Exerc	cisable and	7. Titl	e and	8. Price of	9. Nu
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	Transacti	orNumber	Expiration D	ate	Amou	nt of	Derivative	Deriv
Security	or Exercise		any	Code	of	(Month/Day/	Year)	Under	lying	Security	Secur
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8)	Derivativ	e		Securi	ities	(Instr. 5)	Bene
	Derivative				Securities	3		(Instr.	3 and 4)		Own
	Security				Acquired						Follo
					(A) or						Repo
					Disposed						Trans
					of (D)						(Instr
					(Instr. 3,						
					4, and 5)						
									Amount		
									or		
						Date	Expiration	Title	Number		
						Exercisable D	Date	Title	of		
				Code V	(A) (D)				Shares		

Reporting Owners

Reporting Owner Name / Address	Relationships						
coporting of the Figure 1 and 1 and 1	Director	10% Owner	Officer	Other			
Martin Brian C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035			Senior VP & General Counsel				

Signatures

Brian M. Martin 08/05/2009

**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.
- (2) Represents a grant of restricted stock units subject only to service-vesting requirements. Mr. Martin will vest in fifty percent (50%) of the restricted stock units upon his completion of two years of service with KLA-Tencor measured from the grant date

Reporting Owners 2

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(August 3, 2009) and will vest in the remaining fifty percent (50%) upon his completion of an additional two years of service thereafter. The shares of common stock will be issued as the restricted stock units vest.

- Does not include performance-based restricted stock units, 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.
- (4) Includes 255 shares acquired under the KLA-Tencor Employee Stock Purchase Plan on June 30, 2009.

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.