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 Ty	pe Response	s)														
Name and Address of Reporting Person * Kirk Michael				2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]							5. Relationship of Reporting Person(s) to Issuer (Check all applicable)Director10% Owner					
(Last) (First) (Middle) ONE TECHNOLOGY DRIVE				3. Date of Earliest Transaction (Month/Day/Year) 02/06/2014						X Officer (give title below) Other (specify below) Executive Vice President						
(Street) MILPITAS, CA 95035				4. If Amendment, Date Original Filed(Month/Day/Year)						6. Individual or Joint/Group Filing(Check Applicable Line) 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												
(Instr. 3)		2. Transaction Date (Month/Day/Year)	-		Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			Beneficially Owned Following Reported Transaction(s)			Form:	of Be	7. Nature of Indirect Beneficial	
				(Month/Day/Ye	ear)	Code	V	Amour	(A) or (D)	Price	(Instr. 3 a	sstr. 3 and 4)		Direct (D or Indirec (I) (Instr. 4)	or Indirect (Instr.	
Common	Common Stock 02/06/2014		02/06/2014			A		6,250	A	(1)	6,912 (2	2 (2)		D		
Common Stock		02/06/2014			F		2,397 (3)		\$ 61.83	4,515		D				
Common Stock		02/07/2014			S ⁽⁴⁾		3,853	D	\$ 62.01	662		D				
Common Stock - Restricted Stock Units (5)										92,275	,275 ⁽⁶⁾		D			
Reminder:	Report on a s	separate line fo		Derivative Secu	rities	Acquir	Pers cont the f	ons what ained it form dis	no respo n this fo splays a of, or Be	orm are a curre eneficial	not requesting ntly valid	ction of inf uired to res OMB con	spond unle	ess	C 147	74 (9-02)
1 Tid C	2	2 T		e.g., puts, calls,		rants, op	1				241 3	0 D.:C	0. Manuali an	-6 10		11 37-4
Security	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/\)	Execution Date (Year)	4. Transactio Code (Instr. 8)	on Nu of Of See Ac (A Di of (Ir	Number a		5. Date Exercisable and Expiration Date Month/Day/Year)		Amo Und Secu	itle and ount of lerlying urities tr. 3 and	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s (Instr. 4)	Owne Form Deriv Secur Direc or Inc	of ative ity:	Beneficia Ownershi (Instr. 4)
				Code V	7 (A	A) (D)	Date Exe	e rcisable	Expiration Date	on Title	Amount or Number of Shares					

Reporting Owners

	Relationships						
Reporting Owner Name / Address	Director	10% Owner	Officer	Other			
Kirk Michael ONE TECHNOLOGY DRIVE MILPITAS, CA 95035			Executive Vice President				

Signatures

Jeffrey Eisenberg as Attorney-in-Fact for Michael Kirk	02/10/2014		
**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 February 6, 2013, the Reporting Person received a grant of restricted stock units ("RSUs") covering 25,000 shares of KLA-Tencor common stock. On February 6, 2014, the Reporting Person vested in twenty-five percent (25%) of such RSUs.
- (2) Includes 171 shares acquired by the Reporting Person under the KLA-Tencor Employee Stock Purchase Plan on December 31, 2013.
 - Pursuant to the terms of the February 6, 2013 RSU grant, 2,397 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax
- (3) 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.
- (4) This sale was effected pursuant to the terms of a Rule 10b5-1 trading plan adopted by the Reporting Person on December 13, 2013.
- (5) Each RSU represents a contingent right to receive one share of KLA-Tencor common stock.
- (6) 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.

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.