

INITIAL STATEMENT OF 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 * Lorig Brian (Last) (First) (Middle) ONE TECHNOLOGY DRIVE (Street) MILPITAS, CA 95035 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 02/02/2017	3. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]		
		4. 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)		5. If Amendment, Date Original Filed (Month/Day/Year)
		<input type="checkbox"/> SVP		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

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	2,441	D	
Common Stock - Restricted Stock Units (1)	21,546 (2)	D	

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

SEC 1473 (7-02)

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Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Lorig Brian ONE TECHNOLOGY DRIVE MILPITAS, CA 95035			SVP	

Signatures

/s/ Teri A. Little, attorney-in-fact for Brian Lorig	02/07/2017
**Signature of Reporting Person	Date

Explanation of Responses:

* If the form is filed by more than one reporting person, see Instruction 5(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).

Each restricted stock unit ("RSU") represents a contingent right to receive one share of KLA-Tencor common stock. Does not include performance-based RSUs, if any, (1) 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 a Form 4 within two business days of the date such assessment is made.

Consists of eight different RSU awards covering: (1) 1,528 shares, which will vest as to all of the shares on September 4, 2017; (2) 1,100 shares, which will vest as to 50% of the shares on September 4, 2017 and 2018; (3) 1,985 shares, which will vest as to 33% of the shares on September 3, 2017, 2018 and 2019; (4) 6,022 shares, which will (2) vest as to 25% of the shares on November 11, 2017, 2018, 2019 and 2020; (5) 3,100 shares, which will vest as to 50% of the shares on August 4, 2018 and 2020; (6) 6,200 shares, which will vest as to 25% of the shares on August 4, 2017, 2018, 2019 and 2020; (7) 1,000 shares, all of which vests on February 6, 2017; and (8) 611 shares, all of which vests on September 4, 2017, in each case subject to continued service on the applicable vesting date.

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.