FORM 4

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

OMB APPROVAL
OMB Number: 3235-0287
Estimated average burden
hours per response... 0.5

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

| (11IIIt Of Ty | pe Response | 8) | | | | | | | | | | | | | |
|--|---|--|---|--|--------|-------|--|--------------|--|--|---|--|---|---|---------------|
| 1. Name and Address of Reporting Person * Khan Ahmad A. | | | | 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 | | | | |
| (Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE | | | 3. Date of Earliest Transaction (Month/Day/Year) 02/06/2017 | | | | | | | X Officer (give title below) Other (specify below) EVP | | | | | |
| (Street) MILPITAS, CA 95035 | | | | 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 Acqu | | | | | | ired, Disposed of, or Beneficially Owned | | | | | | |
| (Instr. 3) | | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, any (Month/Day/Yea | Date, if Code (Instr. | | etion | 4. Securities Acquire (A) or Disposed of (D) (Instr. 3, 4 and 5) | | of | 5. Amount of Securities Beneficially Owned Followir Reported Transaction(s) (Instr. 3 and 4) | | ollowing | Form: Direct (D) | 7. Nature of Indirect Beneficial Ownership | |
| | | | | | Со | ode | V | Amour | (A) or (D) | Price | | | | or Indirect (I) (Instr. 4) | (Instr. 4) |
| Common | Stock | | 02/06/2017 | | N | Л | | 6,250 (1) | A | \$ 0 | 6,250 | | | D | |
| Common Stock 02/06/2 | | 02/06/2017 | | F | F | | 2,402 (2) | D | \$ 87 | 3,848 | | D | | | |
| Common Stock - Restricted Stock Units (3) | | | | | | | | | | 61,507 | | | D | | |
| Reminder: | Report on a s | separate line for | r each class of secur | ities beneficially o | wned d | F | erso conta | ons wh | o respoi this for | m are | e not requ | ction of inf uired to res OMB conf | spond unle | ess | C 1474 (9-02) |
| | | | | Derivative Securi e.g., puts, calls, w | | • | | | | | lly Owned | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | | 3A. Deemed Execution Day Year) | 4. | 5. | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. T Ame Und Seco | itle and ount of lerlying urities tr. 3 and | | 9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | Owner Form of Deriva Securit Direct or Indi | f Beneficia Ownershi (y: (D) rect | |
| | | | | Code V | (A) | | Date Exerc | | Expiration Date | Title | Amount or Number of Shares | | | | |

Reporting Owners

| | Relationships | | | | | | |
|---|---------------|--------------|---------|-------|--|--|--|
| Reporting Owner Name / Address | Director | 10% Owner | Officer | Other | | | |
| Khan Ahmad A. C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035 | | | EVP | | | | |

Signatures

| /s/ Teri A. Little, attorney-in-fact for Ahmad A. K | han | 02/07/2017 |
|---|-----|------------|
| **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 RSUs covering 25,000 shares of KLA-Tencor common stock. On February 6, 2017, the Reporting Person vested in twenty-five percent (25%) of such RSUs.
 - Pursuant to such terms of the February 6, 2013 RSU grant, 2,402 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax
- (2) 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 vesting date.
- 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, held (3) 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.

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.